Twenty-seventh Meeting of the Advisory Expert Group on National Accounts

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SNA/M3.24/2C

Impact of the global consultation, by chapter

Consultation on the draft 2025 SNA and BPM7

Draft 2025 SNA for global consultation

Report prepared on 04 Oct 2024.
Below are the **1257** comments on this chapter, provided by **57** respondents.

- Amanda Driver_SA_Biodiversity Consultant
- Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE
- Angel Fernando Pineda Solis _Mexico INEGI
- Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy
- Benson Sim
- Celestino Giron_ECB
- David Wasshausen_US BEA
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- Floris Jansen _Eurostat
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- Jorrit Zwijnenburg_OECD
- Josef Falkinger _Austria National Accounts
- José Bayoán Santiago Calderón USA Bureau of Economic Analysis
- Karen Kuhn_South Africa RB
- Laura Wahrig _Eurostat
- Leandry Moreno_WTO
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- Martha Düker_Deutsche Bundesbank
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- Noemi Frisch _Israel ICBS
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- Olena Andrushkevych_Ukraine SSS
- Petr Musil
- Poonna Pipatpanukul Thailand Bank of Thailand
- Rosie Maslin_UK Government Response
- Russell Krueger _United States IMF Retired
- SE-Michael Wolf_Sweden Statistics Sweden
- Sarah La Rosa Belgium National Bank of Belgium
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- Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst
- derya baş sonbul Türkiye Turkish Statistical Institute/National Accounts
- sna comments received by email
    - Issam Al Khatib, Palestine
    - Allin, Paul
    - Russell Krueger, IMF retired
    - Mashael Jabir Mohammed Al Marri, Qatar
    - Serap Gözel, Turkiye
    - Jamilya Yusupova
    - Demographic and Social Statistics Branch-UNSD
    - Claudia de Camino Ferrario (ECLAC)
    - Jennifer Ribarsky, IMF
    - Alfieri, Alessandra, IMF

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General comments on the consultation

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- **sna comments received by email**

Issam Al Khatib, Palestine: Regarding to your bellow email, about Global Consultation on the draft 2025 SNA, we are pleased to inform you that PCBS review the draft, and we found it comprehensive with no comments to add.

for your kind attention

- **Olena Andrushkevych_Ukraine SSS**

On behalf of the Department for National Accounts of the State Statistics Service of Ukraine please be advised that our colleagues from the mentioned department have thoroughly analysed this draft. We would like to inform that it has no proposals and comments to make.

- **sna comments received by email**

From: Allin, Paul

Dear SNA update team,

I welcome the attention given to well-being and its measurement, and to the inclusion of extensive content on how SNA measures aspects of well-being, either within the SNA sequence of economic accounts or outside of that sequence.

However, the clear delineation of all aspects of well-being presented in Fig 34.1 is not always described so clearly elsewhere. For example, unpaid household service work is clearly placed in the middle column of Fig 34.1 ("**Outside** the SNA sequence of economic accounts") while para 34.1 suggests that SNA **includes** unpaid household service work. It takes careful reading to see that SNA offers full coverage of material well-bring only if it is "adapted and extended" (para 1.11).

Similarly, Chapter 2 would benefit from the early inclusion of Fig 34.1, replacing its own version (Fig 2.1) that appears much later in chapter 2.

While Chapter 34 does make the case that SNA measures of material well-being can be compiled, it is silent on the uses of such measures. This contrasts with Chapter 1, which has section F on uses of the SNA sequence of economic accounts. That section could be read as embracing uses of measures of material well-being contained within the SNA sequence of economic accounts; I would be more reassured if there was explicit reference to material well-being made in section F, as well as on the uses of measures of material well-being.

Chapter 1 as a whole reads like an out-of-date economics text book. For example, para 1.7 only makes sense if the economic analysis and policymaking it describes is in terms of the economy as portrayed in the SNA sequence of economic accounts. It ignores the needs of analysts and policymakers who recognise that the transactional economy, unpaid work, and eco-systems are all inter-dependent. Referring to the “total” economy (eg in 1.8) is misleading. “The economy” referred to in 1.14 and throughout is the SNA model of the economy, not the economy in reality.

In para 2.3, GDP might be one of the most well-known of statistics, but it is not well understood. Moreover, there is increasing critique that following continual GDP growth has resulted in disbenefits, such as environmental destruction and loss of culture and autonomy. Some acknowledgement of this would seem appropriate.

Best regards,

Paul

PAUL ALLIN, CStat, FRSA

- **Mohammad Eunoush Bangladesh Bangladesh Bureau of Statistics Deputy Director**

National Accounts compilers from Bangladesh Bureau of Statistics (BBS) have reviewed the draft SNA 2025 and recommended some points to take into consideration. Being directed, I am mentioning those points below-

1. It is observed that in 2025 SNA many familiar terminologies have been renamed. In this regard, for users’ convenience, a list of old and new terminologies could be added in the appendix of 2025 SNA.

2. Natural disasters like Cyclone, Flood, Landslide, Storm Surge, Tornado etc. often cause significant damages of assets and crops etc. Government requires an instant estimate of the losses and damages. Since 2025 SNA considers environmental issues with importance, it would be helpful if it provide/recommend a guideline for instant estimation of losses and damages due to natural disasters.

- **sna comments received by email**

Russell Krueger, IMF retired:

Having worked over the years on several methodology manuals, I never imagined that the UN could pull off the tight schedule for the revision of the SNA. It now looks like it will succeed. Congratulations - a bit in advance.

Also, much praise to everyone for tackling major new statistical innovations. Tough tasks, but the results are very impressive. The new chapters on the innovations are informative and well-written. Good work !

- **sna comments received by email**

Mashael Jabir Mohammed Al Marri, Qatar:

Greetings from the National Planning Council. The consultation has been reviewed and there are no comments to add on the above-mentioned subject. Shall you have further inquiries or questions, please do not hesitate to contact us.

- **sna comments received by email**

Serap Gözel, Turkiye:

We would like to inform you that our institution (TurkStat) does not have any additional comments or suggestions on the draft System of National Accounts 2025 (2025 SNA).

- **David Wasshausen_US BEA**

We commend the work that has gone into the update of the 2008 System of National Accounts. We appreciate the robust outreach and overall engagement process and have had the opportunity to participate and provide our input in various settings. Thank you.

- **Rosie Maslin_UK Government Response**

General UK comments on SNA 25 full draft

The UK would like to thank the editorial team and all contributors to the process of developing this draft revision of the SNA. We applaud the efforts which have been made and the commitment and dedication of all involved.

Working through this full draft has been difficult with the limited time available. We would encourage the editorial team to keep open the window for further comments as users have the opportunity to absorb the text and its implications and may wish to make further submissions.

Nevertheless, the UK has three major points which it wishes to raise as general comments on the whole text and process:

1. There is significant repetition throughout and between the chapters which disrupts the flow. We assume this will be addressed in the final comprehensive edit, but in terms of being a useful product for compilers it is key that each issue is only addressed once and definitively. There are a number of topics which are addressed in broadly similar terms in multiple places: these need to be streamlined and cross-referenced, not repeated. For example, Chapters 5 and 29 are repetitious, as are Chapters 12 and 25. We hope that dealing with this could materially reduce the length of the text.

1. Not seeing the annexes at this stage has also made it difficult to consider the depth of some of the conceptual issues the SNA presents. It is important these are circulated.

1. Within the draft there are chapters and sections which relate to the sequence of economic accounts and others which refer to thematic / extended accounts and other auxiliary tables. The UK considers it would be beneficial to give greater clarity to which chapters fall into which sphere – the core or the periphery.

On the basis of these points, we remain of the view that while some chapters can be readied for sign off at UNSC in 2025, while others require substantive re-work to be ready to be finalised

These chapters are:

- Chapters presenting the most significant issues and requiring substantive re-drafting: 1, 5, 12, 16, 18, 20, 21, 22, 31, 34, and 38.
- Chapters presenting issues which require some re-drafting: 2, 4, 7, 11, 14, 25, 29 and 35.

We are, however, also aware of the time pressures involved in further re-drafting. From a UK perspective we **advocate a broad two-stage approach to the finalisation of the SNA25 manual.**

We propose that:

- The manual should be divided into two parts: **Part One** which relates to the sequence of economic accounts, and **Part Two**, which relates to extensions beyond the sequence of economic accounts.
- **Part One** should be prioritised for work for submission to UNSC in 2025 for sign-off, with **Part Two** issued in draft form to permit further work to finalise the chapters in this part which require further work for submission to UNSC in 2026 for sign-off. This would replicate the approach taken to signing off SNA 2008, which occurred over two consecutive UN Statistical Commissions.

The UK proposes that the Part One, relating to the sequence of economic accounts would contain the following chapters: 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, and 19. Part Two comprises all other chapters, noting that the UK still recommends that chapters 20 and 21 be omitted from the SNA as being more appropriately included in a separate manual or other supplementary standalone guidance.

This design would allow the editorial team to focus, at this time, on chapters 1, 4, 5, 7, 11, 12, 14, 16, and 18, with chapters 1, 5, 12, 16, 18 prioritised as requiring extensive re-work.

This would permit the issues in chapters 2, 20, 21, 22, 25, 29, 31, 34, 35, and 38 to be addressed, with chapters 20, 21, 22, 38, 31, 34 prioritised as requiring extensive re-work.

- **Lenka Valenta_Germany FSO**

Comments on behalf of National Accounts Department (German Federal Statistical Office):

First of all, we would like to congratulate all the authors who contributed to this SNA update, which includes many substantial improvements of this macroeconomic statistical standard in a dynamic economic environment.

Unfortunately, some of these potential advancements bring into the system of national accounts elevated necessity for various assumptions, further imputations and extensive modelling (too complex or too simplified), which are often necessarily of subjective nature and can be harmonized only to a limited extent. This may hamper the international comparability, as well as the role of national accounts as official statistics, which is used for economic analysis and policy making. In addition, some new concepts, which are intended as enhancements to the system may hardly be practically implemented in a meaningful way, and their implementation in the end will not embody improvements for the users, but bring opposite effects.

In this respect, we would like to point out in particular two of our major concerns:

1. Valuation of non-market production, which should newly include return to capital

For the estimations of return to capital, an interest rate needs to be selected (which is already very subjective) and the GDP / GNI will rise or decrease when interest rates for government debt will change. That means that the development of GDP / GNI is influenced by the selected interest rate and its changes and differences between countries will impact the international comparability. In addition, non-market producers will persistently show positive operating surplus, although no actual profit was generated.

2. Treatments for biological resources

For biological resources (and then consequently for land), there is a number of outstanding conceptual issues, which need to be still addressed (and some treatments clarified), to ensure meaningful results within the practical implementation. If not possible, an inclusion on the SNA research agenda should be considered.

Our last general remark concerns the integrated framework of national accounts. The first part of the integrated framework (the sequence of economic accounts) is well defined and described. As regards "the other parts of the integrated framework", their exact coverage is not that clear and should be (better) explained (examples given here and there (e.g. SUTs, Labour market tables, Table on capital services, ...)), but never a complete list. Finally, a clear typology of all these various statistical products (accounts, tables) and their placement within the broad framework would then greatly facilitate communication with users and may help in formulation of implementation priorities and strategies.

- **sna comments received by email**

Jamilya Yusupova

First proposal concerns to Financial account and to its operations. We know that this account has offsetting entries with other c accounts. It would be useful to show this entries with other accounts. For example, we have some economy operations relating to output in the production account and this record can be shown as sales between non financial corporation and household in their production accounts and financial accounts. This approach will provide more understanding for compilation of financial account and for its balancing.

Second is matrix whom to whom. There is not its example in SNA 2008. We can find the reminder about it but we can not clearly examples for its compilation.

Third, when we read about components of accounts on the side of use and resources we can not see details of these components only reference on other manual. For example, when we speak about the net taxes on production and import for collection of them we have to see them in GFS 2001. I see, that is wonderful document (GFS 2001), but for integrated system we need more clearly examples about structure of these components.

- **Statistics Norway**

In general Statistics Norway recognises the update of the SNA as an important improvement to the 2008 SNA and we would like to commend the substantial work undertaken by the many contributors.

However, we have earlier in the process and at the 55th UNSC in 2024 raised concerns about some of the proposed changes.

We are still concerned about the increasing number of assumptions required to compile some of the recommended changes to the main sequence of economic accounts. Our concerns are in particular related to the treatment of electronic data as an asset, the return to capital in the sum-of-cost approach, and the treatment of mineral and energy resources.

Maintaining a high reliability and comparability of the core system of national accounts and their key indicators is essential. Changing the SNA in such a way that the core accounts are more dependent on imputed values, risks reducing comparability of key macroeconomic aggregates over time and between countries.

Our concerns are, however, not only pragmatic. In the case of return to capital and the treatment of depletion of natural sources as a production cost we do in addition have doubts about the conceptual change. As we see it, these changes break with some of the fundamental key principles in SNA and should be more thoroughly discussed.

Statistics Norway has supported the work to develop and test practical implementation guidance for the most important recommendations and has also participated in two task teams and testing. However, we are in the opinion that even though guidance might mitigate some of the risk, the guidance does not remove the fact that the results are sensitive to use of assumptions and the presence of available data.

We recognise that some of the proposed changes may have relevance for analytical purposes. A better way forward, in our opinion, would be to implement these changes in supplementary or extended accounts, and not in the core SNA.

- **UNSD Ilaria Di Matteo**

Comments from the SEEA Central Framework Technical Committee of the UNCEEA

The SEEA Central Framework Technical Committee of the UNCEEA held a special meeting to discuss selected issues related to natural capital with focus on chapter 2, 34 and 35. The comments received from members of the Technical Committee are provided below.

The update of the SEEA Central Framework, which was recently endorsed by the UNSC in March 2023, will give an opportunity to reflect more on the changes in the 2025 SNA and assess more fully on their impacts on the SEEA CF. The differences between the SNA and SEEA should be highlighted in the text wherever possible, including an explanation of why there are differences.

In general, the SEEA should be viewed as part of the suite of macro standards rather than a complement to the SNA. Paras 1.66 and 1.81 mention that the SEEA complements the SNA, but it extends the SNA to more fully cover the environment.

- par 14.59-14.63: Only biological resources are mentioned in these paragraphs; it is suggested to delete “water resources and other natural resources”, which are not mentioned in this section.

- par 14.62: The text in this paragraph should be clarified. If resource rent is used to value the forest land plus the provisioning element, this would not be consistent with the SEEA and forest accounts. It also is not clear how standing timber (inventories) is to be valued.
- par 14.63 Suggest mentioning that valuation is to be based on resource rent.
- par 35.24-35.35 The SEEA itself has not (yet) defined natural capital, and the definition of natural capital provided in the SNA2025 (sum of natural resources and ecosystem assets) is problematic, as there is a significant overlap leading to double counting. It is suggested to recognize that these measurement categories are not mutually exclusive. This is (less) problematic for the SNA (that disregards ecosystem assets) but more so for the SEEA. It is also recommended to refer also to the SEEA EA, in addition to the SEEA CF, where it has been tried to integrate natural resources and ecosystem assets. It should be noted that the concept on natural capital which was not deliberately defined in the SEEA and will be discussed during the update of the SEEA Central Framework.
- par 11.87. We would suggest changing the terminology of "land improvement" to "land preparation", which better reflects the concept of preparing land for production activities. The rationale is that land improvement/preparation is often (almost always) destructive of ecosystem assets, which are the second major component of natural capital. The (overall) destructive effects of land improvement/preparation on ecosystems should also be mentioned in the text.
- The tone and messaging of Chapters 1 and 2 is different, with Chapter 1 implying that the SNA is the whole encompassing framework providing the answers for Beyond GDP. Chapter 2 instead implies that the SEEA is a macro framework on par with the SEEA. The discussion on the relationship between the SNA and the SEEA needs to be further explored. It is confusing for countries to have different frameworks that ask for countries to implement things in a slightly different way.
- Definition of depletion – The definition of depletion needs to be better explained. Taking net growth as depletion (if extraction is bigger than growth) is an oversimplification. It seems to imply that the ecosystem is in good condition. But this is often not the case. How do we deal with cases when for example fishing is forbidden to allow the stock to regenerate? Should any catch happening in these areas be considered depletion? This perhaps should not be the case.
- Asset/production boundary- extraction of fuelwood from a natural forest outside the SNA asset boundary constitutes production, but the asset of a natural forest is

outside the SNA asset boundary. It is not clear how to deal with this situation. A similar case takes place for extraction of fish which is caught from assets which are not under quotas regimes.

- Treatment of illegal extraction of resources – it is currently treated as uncompensated seizure and as such does not contribute to the depletion of the asset. This is counterintuitive and does not reflect what it actually happens.
- High seas fish stocks – more than 90 countries have signed the high seas treaty and is currently being ratified. Although not many countries have ratified it, the management of the resources in the high seas will be subject to governance that will be allocated to national jurisdictions. It may be good to mention the possibility of extension of the asset boundaries.
- Recording of depletion caused by foreign boats operating in EEZs of a national jurisdiction holding quotas should be explained. These foreign operators cause depletion, and the question is whether this can be recorded as an export of depletion cost.
- Treatment of land. This needs further thought, as it is unclear whether land is included with the value of the asset itself (e.g. agricultural land) or land under buildings and now possibly forestland being treated as agricultural land.
- Chapters 2, 34 and 35 seem to be not fully integrated with the rest of the SNA. They are more standalone chapters which do not make link to the other chapters of the SNA, and vice-versa the SNA does not make reference to these chapters describing for example where it differs from the SEEA and why (e,g treatment of land).
- There are a lot of repetition of concepts in the different chapters of the SNA sometimes explained with somewhat different terminology. This is not very helpful as it introduces room for interpretation. Cross consistency across chapters should be assessed, especially if new changes are introduced.
- With regards to the issue note on natural capital recently discussed in the AEG:
    - Issue 2: With regards to the asset classification of non-renewable mineral and energy resources, it is strongly suggested to keep oil and natural gas as separate categories, to encourage the collection of disaggregated data for these two categories, which is important for climate change policies.
    - Issue 3a): From the SEEA perspective, this change moves further from the SEEA treatment of land. Land should remain on the research agenda as this is one of the topics where the SNA differs from the SEEA. In addition, it is

important to use the term "forest land" and not to abbreviate to "forest". The use of "forest land" is mostly consistent throughout the issues note, but there are a couple of places where "forest" should be changed to "forest land", one place where "forest area" should be changed to "area of forest land". On page 3, "if a country's forests are on two pieces of land" should be changed to "if a country has two pieces of forest land".

- Issue 3c): Looking at the initial proposal for the classification of biological resources, it is not clear why there is the distinction of animals yielding single products only for animals and not for forest. The treatment of standing timber in the current proposed classification also is not clear. It is suggested to adopt the alternative proposed because it is clearer for users and is more consistent with the classifications for other assets (i.e. based on the characteristics or purposes of the asset, rather than the accounting treatment).
- We agree with the proposal in Issue 5.

- **sna comments received by email**

Comments on the SNA 2025 Prepared by the Demographic and Social Statistics Branch-UNSD

Definition of a Household:

The current definition proposed in the SNA 2025 diverges slightly in wording from the one used in the **UN Principles and Recommendations on Population and Housing Censuses** (Census P&R rev 4.)[1]. To ensure consistency, it is recommended to adopt the P&R definition.

In particular, it should be noted that countries employ two main concepts when collecting household data: the 'housekeeping' concept and the 'household dwelling' concept. While the former is more common, the latter is used by several countries, particularly those that rely on administrative records for population statistics.

Additionally, please note that paragraphs 32.10[2] and 5.218[3] of the SNA provide definitions of households with minor variations in their phrasing.

Population in collective living quarters:

The Census P&R rev4[4] refers to the population at the specific moment of the census, while SNA 2025[5] refers to a longer-term perspective. For example, tertiary students living in dormitories will be considered institutional population according to the P&R if they were living in dormitories at the moment of the census taking while for the SNA they should be treated as members of the individual households to which they normally belong.

The P&R differentiates between primary/secondary students and tertiary students regarding their place of usual residence:

1. Primary/secondary students: If they are away from home during the school term, their place of usual residence is considered their family home.
2. Tertiary students: If they are away from home while attending college or university, their place of usual residence is their term-time address, whether it's an institution or a private residence.

Reference person:

The concept of a "reference person" in the SNA aligns with the approach recommended in the Census P&R that promotes moving away from the traditional notion of a "head of household."

However, while the P&R specifies that countries should select criteria for identifying the reference person (needed to determine relationships between household members during data collection), the SNA suggests that this person should be the one with the largest income or the one who makes the major decisions about consumption. This method could introduce biases, such as gender bias, similar to those associated with the concept of the head of household. The P&R cautions that automatically designating the reference person as the highest income earner has its drawbacks, as this person may not represent the broadest range of explicit kin relationships.

It should also be noted that when administrative data sources are used, deriving the relationship of household members to the reference person may present several challenges.

Children definition age limits:

The Census P&R[6] and SNA 2025[7] exhibit differences in defining age limits for children. The P&R defines children (for statistical purposes) as individuals under 15 years of age. In contrast, the SNA defines children with an upper age limit of 16 years, extending up to 24 years if the individual is the dependent offspring of a household member still residing at home.

Definitions of resident population

SNA

2. Population

5.10 In the context of national accounts, data on population are important for deriving per capita figures for aggregates such as GDP and NDP. They also constitute the main elements for defining households. ***The population of a country is most simply defined as all those ~~natural~~ persons who are resident in the economic territory at a given point in time.*** In this definition, the SNA and BPM concept of residence is used, that is ~~natural~~ persons are resident in the country where they have the strongest links thereby establishing a centre of predominant economic interest. Generally, the criterion would be based on their intended country of residence for one year or more. In most cases, the concept of residence is straightforward, being based on the dwelling a person occupies on a permanent basis, although there are some borderline cases.

5.11 Generally, ~~natural~~ persons who are resident in a country for one year or more, regardless of their citizenship, should be included in the population measure. An exception is foreign diplomatic personnel and defence personnel, together with their families, who should be included as part of the population of their home country. The "one-year rule" means that usual residents who are living abroad for less than one year are included in the population but foreign visitors (for example, holidaymakers) who are in the country for less than one year are excluded from the measured population. Further elaboration on the application on the residence criterion in special cases is given in section J~~further below~~.

5.12 Annual population is typically estimated from less frequent population censuses. Censuses usually count the number of people present on a specified night or the number of people who usually live in a dwelling, even if they are not present when the census is enumerated. However, a census is often conducted only every five or ten years and sometimes less frequently. In years between censuses, updated information on the population of a country is provided by sample-based surveys and by drawing on information on births and deaths and on net migration.

With reference to SNA paragraphs 5.10 to 5.12, three points need to be highlighted regarding the recommendations in the Census P&R Rev4[8]: i) The reference period for designating a person as a usual resident in the Census P&R is flexible and offers two periods, acknowledging that some countries use a longer reference period while others use a shorter one; ii) The Census P&R uses only time reference criteria and does not include the SNA criteria of "strong links or a center of predominant economic interest"; and iii) While paragraph 5.12 describes how population estimates are generated in countries where census statistics are compiled from field-based data collection, it does not address the cases of countries compiling population statistics from administrative registers.

We recommend SNA refers/links to the Census P&R rev4 for any concepts, definitions, recommendations related to "Population", given that population data will be produced by countries according to the P&R. This will promote alignment between economic and population statistics.

Inclusions/exclusion of population groups in (usual) resident population

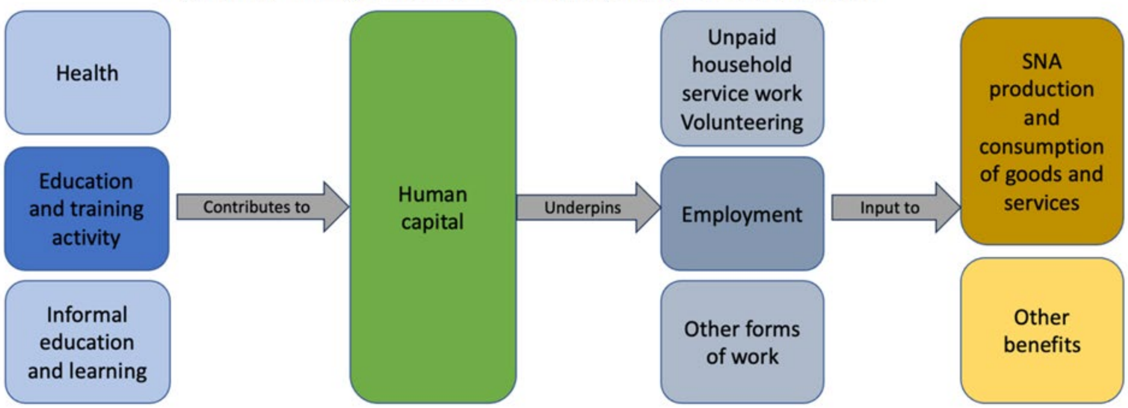
SNA Section J

With regard to the inclusion/exclusion of population groups in the (usual) resident population, there is agreement between the SNA and the Census P&R[9], except in the treatment of tertiary students studying abroad. The SNA recommends including such groups, while the P&R recommends excluding them.

Unpaid household service work and human capital.

To acknowledge the contribution of all forms of work, including unpaid household service work, to the formation of human capital, it is suggested to have the arrow between Human Capital and forms of work going in both directions: 

Figure 34.2: Linking education, human capital, employment and production



[1] Census P&R rev 4,

“5.135 A *household* may be:

- A one-person household, that is to say, a person who makes provision for his or her own food or other essentials for living without combining with any other person to form part of a multiperson household; or
- A multiperson household, that is to say, a group of two or more persons living together under the same roof who make common provision for food, housing or other essentials for living. The persons in the group may pool their resources and have a common budget; they may be related or unrelated persons or a combination of persons both related and unrelated. This arrangement exemplifies the “housekeeping” concept.” It should be noted, however, that some countries (including many that compile their census statistics from administrative sources) use a concept different from the “housekeeping” concept. Such countries use the “household dwelling” concept, which regards all persons living in a housing unit as

belonging to the same household. According to this concept, there is one household per occupied housing unit. Consequently, the number of occupied housing units and the number of households occupying should always be equal and the locations of the housing units and households are identical. It should be noted, however, that the “housekeeping concept” does not assume that the number of households and housing units are, or should, be equal. In countries that use the “housekeeping” concept, where multiple households share a single dwelling unit, the number of households will be greater than the number of dwelling units.

[2]SNA 2025 Chapter 32 “32.10 It is useful to begin by recalling the definition of a household given in paragraphs [5.xxx]4.149 to. 4.157. A household is defined as a group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. In general, each member of a household should have some claim upon the collective resources of the household. At least some decisions affecting consumption or other economic activities must be taken for the household as a whole.”

[3] SNA 2025 Chapter 5 “5.4 For purposes of the SNA/BPM, a household is a group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. As well as individual households, there are units described as institutional households that comprise groups of persons staying in hospitals, retirement homes, convents, prisons, etc. for long periods of time.

5.218 For the purposes of macroeconomic statistics, a household is defined in paragraph 5.4 as a single person having a separate living accommodation, or a group of natural persons who share the same living

accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods

and services collectively, mainly housing and food. In general, each member of a household should have

some claim upon the collective resources of the household. At least some decisions affecting consumption

or other economic activities must be taken for the household as a whole.”

[4] Census P&R rev 4 "2.41 As emphasized in paragraph 2.29, institutions represent the second general framework within which persons, as major units of enumeration, are identified. The institutional population comprises persons who are not members of households. These include persons living in military installations, correctional and penal institutions, dormitories of schools and universities, religious institutions, hospitals, refugee camps and so forth.[4] Personnel responsible for the running of an institution and not living in dormitories or similar accommodations should be excluded from the institutional population. Similarly, some buildings housing seniors may have different levels of care, with independent living quarters that should not be considered as collective living quarters like some other quarters with higher levels of care. Although the members residing in the institutional households constitute a single unit, keeping in mind that in future more and more people would submit the responses in census through self-enumeration and past data may also be used in future censuses, each member may be enumerated as single member household. "

Census P&R rev 4 "5.41. There are population groups for which some uncertainty may arise in defining their place of usual residence within the country. The recommended conventional treatment of these cases is as follows:

1. b) For persons of minor age in primary and secondary education who are away from home during the school term, their place of usual residence should be their family home/residence.
2. c) For students in tertiary education who are away from home while at college or university, their place of usual residence should be their term-time address regardless of whether this is an institution (such as a boarding school) or a private residence."

[5] SNA 2025 Chapter 32 "32.13 Persons living permanently in an institution, or who may be expected to reside in an institution for a very long, or indefinite, period of time, usually one year, are treated as belonging to a single institutional household when they have little or no autonomy of action or decision in economic matters. Some examples of persons belonging to institutional households are the following: a. Members of religious orders living in monasteries, convents or similar institutions; b. Long-term patients in hospitals, including psychiatric facilities; mental hospitals; c. Prisoners serving long sentences; d. Elderly Old persons living permanently in retirement care homes.

32.14 On the other hand, persons who enter hospitals, clinics, convalescent homes, religious retreats, or similar institutions for short periods, who attend residential schools, colleges or universities, or who serve short prison sentences should be treated as members of the individual households to which they normally belong."

[6] Census P&R rev 4, "3.537 For statistical purposes, "children" are defined as persons under 15 years of age, and "youths" are defined as those aged 15–24. However, it is useful to further divide these special groups by 5-year age groups (or nationally, by groups of specific school ages) because of the rapid changes in characteristics in this age range, such as in school attendance, marital status and activity status. Also, because of differences by sex in the age at marriage or family formation, family or household status and entry into the labour market, data should be classified not only by age but also by sex. To this end, the distribution by single years of age and sex is useful. If single-year age distribution is not feasible for young children under age 5, it would be desirable to distinguish between those under 1 year of age (infants) and those aged 1–4. For youths aged 15–19, it would be desirable to distinguish between those 15–17 years of age and those 18–19 years of age, or to have a distinction corresponding to the age below which the country considers an individual to be a minor. According to the Convention on the Rights of the Child, anyone under 18 years is a child unless national law stipulates a lower age of majority."

[7] SNA 2025, Chapter 5, "5.237 Within the above household compositions, children are generally classified as up to 16 years and up to 24 years if they are the offspring of one of the household members and are still living at home. The classification of children may vary between countries dependent on national legislation."

[8] **Census P&R rev4:**

- It is recommended that countries apply a threshold of 12 months when considering place of usual residence according to one of the following two criteria:
- The place at which the person has lived continuously for most of the 12 months before census reference day (that is, for at least six months and one day, not including temporary absences for holidays or work assignments) or intends to live for at least six months;
- The place at which the person has lived continuously for at least 12 months before census reference day (not including temporary absences for holidays or work assignments) or intends to live for at least 12 months.

- For register-based censuses, the place of usual residence could be taken to mean the place of legal or registered residence, defined with reference to a qualification period of 12 months or assessed with reference to the 12-month criterion.

[9] Census P&R rev4:

- There are various population groups for whom some uncertainty may arise about their inclusion in the usual resident population. The following persons should generally be considered as part of the usually resident population:
- Persons found at the moment of enumeration who cannot identify a place of usual residence, such as those who change residence often;
- National military, naval and diplomatic personnel and their families, located outside the country, irrespective of their duration of stay abroad;
- Foreign citizens working within the country for international businesses or organizations (but not including foreign diplomats or military forces) and their families, provided that they meet the criteria for the usual residence in the country;
- Merchant seafarers and fishers usually resident in the country but at sea at the census reference time (including those who have no place of residence other than their quarters aboard ship);
- Persons who are irregular or undocumented migrants, as well as asylum seekers and persons who have applied for, or been granted, refugee status or similar types of international protections, provided that they meet the criteria for usual residence in the country (the intention is not to distinguish these persons separately, but rather to ensure that they are not missed from the enumeration);
- Persons who cross a frontier daily or weekly to work or study in another country, provided that they meet the criteria for usual residence in the enumeration country;
- Children born in the 12 months before the census reference time and are usually resident in the country at the census reference time; and
- Persons who regularly live in more than one country during a year, if they reside in the country conducting the census most of the time, regardless of whether they are physically present in that country at the census reference time.

On the other hand, the following group of persons should generally be excluded from the usual resident population:

- Foreign military, naval and diplomatic personnel and their families, located in the country, regardless of their duration of stay and/or place of usual residence;
- Third-level students who are or intend to be absent from the country for 12 months (most of, or at least);
- Persons who regularly live in more than one country during a year, if they reside in the country conducting the census the least amount of time, regardless of whether they are physically present in that country at the census reference time

- **sna comments received by email**

From **Claudia de Camino Ferrario (ECLAC)**

Given the depth of some of the proposed changes, it will be essential to develop methodological guidelines and proposals to address more complex topics, such as the measurement of Natural Capital. On September 10th and 11th, Latin American and Caribbean countries participated in the Annual National Accounts Seminar, and this was a recurring concern. Support will be required for the implementation of the 2025 SNA and certain conventions to ensure that comparability is maintained.

- **sna comments received by email**

Jennifer Ribarsky, IMF

The IMF thinks that the chapters are in good shape. We believe it is ready for endorsement by the UNSC.
We found a few instances of inconsistencies across chapters for your consideration.

Links between Chapters 5, 32, and 34 on sectorization.
1. It is suggested that Chapter 32, which refers to groupings, align with Chapters 5 and 34 by aligning the term sectorization.
• For the sectorizacion proposed for the household sector, Chapter 32, unlike Chapter 5, refers to groupings rather sectorizacion (par 32.99 and 32.100).

Chapter 32 Households
32.99 Based on these criteria, the primary recommendation for the grouping of households is on the basis of deciles of equivalized household disposable income. This involves looking at the relative income available to a household, ranking households accordingly and allocating them into decile groups. Of course, a decile breakdown may still conceal large inequalities within these groups and hence further breakdowns into more granular groups may be considered. This may be particularly relevant for the top income and wealth

groups. Thus, accounts for the top 5%, 1% and even 0.1% of income earners may be compiled.
32.100 Other household groupings that may be considered include those based on levels of permanent income, main source of income the age of the reference person and the composition of households. Section C and Chapter 34 provide additional discussion on the subsectoring of households and the range of characteristics of households and household members that can be considered in distributional accounting and analysis.

Chapter 5. Residence, institutional units and sectors. Section G. The households sector and its subsectors. 4. Subsector of the household sector

5.229 The SNA has to be applied flexibly, not rigidly. In order to implement any of the possible methods of subsectoring the households sector suggested below, individual countries should make their own decisions about what they consider to be the most relevant classification. Thus, the fact that a specific, detailed classification according to a criterion of interest is proposed here should not be interpreted as implying that the characteristics proposed are necessarily or always the most important for purposes of economic analysis and policymaking. Having said that, in view of the importance of having internationally comparable data on the distribution of income, consumption, saving and wealth across household groups, below a subsectoring according to income and wealth deciles is put forward as a standard breakdown, while other breakdowns are considered to be supplementary items, which could be more or less relevant depending on country circumstances.

Subsectoring according to levels of income and wealth (equivalized disposable income: deciles, and if possible, top 5% and top 1%)
Subsectoring according to other criteria : source of income and age of members, and other alternative classifications.

• Also, Chapter 34 refers to subsectors, not groupings, for those related to income, consumption and wealth.
34.52 The compilation of accounts showing the distribution of household income, consumption and wealth distributional results entails breaking down results for various accounts of the household sector as defined within the SNA, into more granular subsectors consisting of specific groups of households

• Also, when explaining sectorization, Chapter 32 in Section C refers to that related to production, consumption, and income perspective, and not to that coming from the distribution of income, consumption, and wealth. It would be convenient to align all the sectorizations proposed and highlight that suggested as standard according to paragraph 5.229.

2. It is suggested to include in Figure 34.1 Aspects of well-being the line for Human capital in the second column below. Human capital is included in the circles, but not in the columns. We also noticed that the "clean" PDF version of the manual did not include the circles in figure 34.1 whereas this version does https://mdgs.un.org/unsd/nationalaccount/SNAUpdate/2025/2025SNA_CH34_V11.pdf

3. Alignment of the term implicit financial services on loans and deposits instead of FISIM in Chapter 34. Paragraphs 34.32 and 34.56 still refer FISIM.

4. 34.121 A final extension concerns data on the provision of early childhood education which will commonly involve unpaid household service work and hence is outside the scope of the SNA production boundary. An extension to consider the role of unpaid household service work might also extend to recognize the contribution of other unpaid household service work activities that support the development of human capital such as those relating to childcare, nutrition and information services. Estimates concerning theseis activitiesy can be incorporated in the SAET framework recognizing the challenges involved in measuring and valuing unpaid household service work as described in Section CD.

Additional comments

1. The term "economic capital" is discussed in Chapter 2 and then Chapter 35. It may be useful to include the term "economic capital" in other places as well, especially in Chapter 11 on "Capital account" and in the discussions on capital services.
2. Reading through Chapter 35, it seems that ecosystem assets and ecosystem services are kept out of the purview of the SNA2025 and no additional tables are being proposed. (Para 3.184 states that "No thematic or extended accounts/tables are defined in relation to environmental issues. For this purpose, the System of Environmental-Economic Accounts (SEEA) provides an integrated framework complementary to the SNA."). Further, Figure 35.1 shows that Ecosystem assets are shown as being excluded from the SNA.

♣ However, there are at least two references to point out that though not explicitly, but the values of natural resources may capture part of the value of the "ecosystem assets".

♣ Para 35. 27 says that – "While this framing of natural capital encompasses stocks of natural resources and ecosystem assets, these two categories of natural capital are not mutually exclusive and there is a clear overlap between ecosystem assets and a number of natural resources including land, biological resources and water resources. For example, from the perspective of natural resources the stock of fish in a lake is a distinct asset while from the perspective of ecosystem assets the lake is a type of ecosystem and the fish stock is a feature or characteristic of that asset in addition to the water, plants and other animals in the lake. In effect, accounting for the stock of natural resources has a focus on individual components of the biophysical environment whereas accounting for the stock of ecosystem assets has a focus on the combination of individual components in distinct contexts."

♣ Similarly Para 35.61 states that "in scope of ecosystem accounting, there will be an overlap between the monetary value of ecosystem assets and the value of the land recorded in the SNA balance sheet. This overlap arises because the ecosystem services generated by those areas include some services which contribute to generate economic benefits for the owners of the land. For example, the value of agricultural land will be linked to the supply of crop provisioning services, the value of forest land will be linked to the supply of wood provisioning services and the value of urban land will be linked to the supply of recreation-related services (e.g. from urban parks). Consequently, care needs to be taken in integrating measures of ecosystem asset values in monetary terms with the value of land and other assets in the SNA balance sheet. This may be interpreted to mean that the value of land as an ecosystem asset may be included in the SNA.

♣ In view of the text in these two paras, can we give a reference to Para 35.27 and 35.61 in Figure 35.1 and mention that part of the ecosystem assets may be covered.

- **sna comments received by email**

Alfieri, Alessandra, IMF

1.The tone and messaging of Chapters 1 and 2 is different with Chapter 1 implying that the SNA is the whole encompassing framework providing the answers for Beyond GDP. Chapter 2 instead implies that the SEEA is a macro framework on par with the SEEA. The discussion on the relationship between the SNA and the SEEA needs to be further explored. It is confusing to countries to we have different frameworks that ask for countries to implement things in a slightly different way.

2. Definition of depletion – The definition of depletion needs to be better explained. Taking net growth a depletion (if extraction is bigger than growth) is an oversimplification. It seems to imply that the ecosystem is in good condition. But this is often not the case. How do we deal with cases when for example fishing is forbidden to allow the stock to regenerate? Should any catch happening in these areas be considered depletion? – in my opinion that should be the case.

3. Asset/production boundary- extraction of fuelwood from a natural forest outside the SNA asset boundary constitutes production but the asset natural forest is outside the SNA asset boundary. How to deal with that situation? A similar case takes place for extraction of fish which is caught from assets which are not under quotas regimes.

4. Treatment of illegal extraction of resources – it is currently treated as uncompensated seizure and as such does not contribute to the depletion of the asset. This is counterintuitive and does not reflect what it actually happens.

5. High seas fish stocks – more than 90 countries have signed the high seas treaty and is currently being ratified. Although not many countries have ratified it, the management of the resources in the high seas will be subject to governance that will be allocated to national jurisdictions. It may be good to mention the possibility of extension of the asset boundaries.

6. Recording of depletion caused by foreign boats operating in EEZs of a national jurisdiction holding quotas should be explained. These foreign operators go cause depletion, the question is whether this can be recorded as an export of depletion cost.

7. Treatment of land. This needs further thought as it is unclear whether land is included with the value of the asset itself (e.g. agricultural land) or land under buildings and now possibly forestland being treated as agricultural land.

8. Chapters 2, 34 and 35 seem to be not fully integrated with the rest of the SNA. They are more standalone chapters which do not make link to the other chapters of the SNA and vice-versa the SNA does not make reference to these chapters describing for example where it differs from the SEEA and why (e,g treatment of land).

9. The SNA introduces and defines the concept on natural capital which was not deliberately defined in the SEEA. This may need to undergo discussion and consultation among the environmental accounting community.

10. There are a lot of repetition of concepts in the different chapters of the SNA sometimes explained with somewhat different terminology. This is not very helpful as it introduces room for interpretation. Cross consistency across chapters should be assessed, especially if new changes are introduced.

Chapter 1: Introduction

8 Comments

- **Eli Fenichel_US Yale Univ**

1.9 – this was a great addition

1.26 What is the notion of "earned?" This needs clareification.

1.39 – well done

1.47 - It is an open question about how to think about financial assets v non-financial assets. This probably should be added to the research agenda. There is an argument that only non-financial are wealth because financial assets are claims on non-financial assets (or contracts) to be produced, but that is probably also overly simple.

1.61 – Defensive expenditure should also be mentioned in this area of the Chapter 1.

1.62 – household provided transportation is probably an area that does not get enough attention.

1.62 - The challenge is the existence of household flows influence market prices. For example, a 5% change in the home care of children would have large effects on the demand for center provided childcare services. Not to mention informal babysitting and in home provide daycare services. Likewise driving one's self and the development of the ride sharing services. These are close substitutes. Finally, the internet has created a lot of odd in home work, e.g., travel agent services. Scheduling flights for one's self is not leisure. It has impacts on the output of the travel industry. It seems like it would also matter from productivity measures.

1.63 - This is a legitimate concern and it is good that it is brought forward. However, I don't think this is 100% correct. The existence of household produced services influences shares of industries in the economy. It influences savings and borrowing decisions. It makes sense to marginalize these services off in some summaries but not in others. Therefore, household services (perhaps via time use surveys) needs to be fully integrability with current production boundary, even if these are beyond the production boundary. Therefore, I suggest text such as, "Efforts should be made to enable extended measures that seamlessly included household produced services, as these influence market prices and market shares."

1.64 – Unpaid household work is important. please say that these should ideally harmonize with production boundary measures.

16.5 – the statement, “Process is not managed by an institution unit and the fish do not belong to any institutional unit” is not factually correct. here are international treaties that manage some high seas stocks like tuna and whales. Furthermore, most fisheries are in EEZs, where national governments act as institutional units.

16.5 - The book end cases are ok, but there is a lot in between. Expenditures managing wild forest and stocks with in EEZs is production, and the stocks themselves are assets. This should be made clear here. These expenditures may come from NGOs, governments, universities etc.

1.66 – “Similarly, a range of ecosystem services that do not produce any direct monetary benefit are excluded.

However, as explained in chapter 34 Measuring well-being, the compilation of complementary accounts

covering ecosystem services according to the System of Environmental- Economic Accounting Ecosystem

Accounting 2021 is encouraged.” This needs more explanation. The challenges is when the system is open and when is it closed. If a wetland is maintained to improve water quality, this is a priced service. It is just the pricing intermediate services. It appears in the final services. If the wetland is drained for housing. The new housing is production. Water treatment upgrades are production, but there is no record of capital loss leading to the need for the upgrade. This is a form of double counting that is ubiquitous in national accounts. This is because the wetland is not carried as an asset that is disposed of in the accounts.

1.68 – “wild animals” -- It would be good to point out that in many countries fish stocks, within EEZs have management plans that would put them on the balance sheet, that many forests have management plans that would put them on the balance sheet, lakes and rivers managed for water supply put them on the balance sheet.

1.68 – “atmosphere” needs nuance. Local air quality (PM2.5) is certainly something governments can act as owners over and capitalize in the form of worker productivity. I understand if we don't want to address CO2, but PM2.5 and other local pollutants can be managed.

1.69 - would benefit rom examples.

1.76 - This probably should be moved up with the asset boundary discussion. I wonder if things like artistic original or rents from patents are the stores of human capital and if it would help to make these connections?

1.78 - This would be a good place to discuss defensive expenditure. This is especially important for capital maintenance expenditure for assets that are omitted from balance sheets -- even when the SNA would have them show up on balance sheets. This is especially the case for natural assets.

1.81 - My understanding is that this is not a UN system. It is just the SEEA, like the SNA is not the UN SNA. This should be made very clear.

1.84 - Fully understand and support the point here. And, it is should also be made clear that the SNA recognizes the modern mico-macro economic synthesis. The issues here are not conceptual ones, rather measurement and practicality ones.

1.101 - This is really good. It should be stated that the term satellite account is disused and split into thematic and extended accounts. ...

This will help with continuity with country level docs that reference satellite accounts.

- **Nourah Aljehani Saudi Arabia General authority for statstics**

Treatment of Unpaid household work is important.

- **SE-Michael Wolf_Sweden Statistics Sweden**

Since there is no designated area for general comments on the draft 2025SNA we put it here:

General comments on the draft 2025SNA

Introduction

Statistics Sweden recognises the update of the SNA as an important step to better align the SNA framework to user needs and new developments in the field of economic statistics. However, we have earlier in the process and at the UNSC meeting in February 2024 expressed concerns about some of the proposals.

General remarks

Our concern regards, in particular, the reliability and relevance of GDP as an indicator for economic policy. The experience from the latest SNA-revisions is that the GDP as an indicator of economic activity has become less reliable. This is among other things due to the problems of estimating the output of own account intellectual property products (IPP) included in GDP both in the 1993 revision (computer software, artistic originals etc.) and the 2008SNA (R&D). One of the main challenges in the update process is therefore to improve the statistical quality of GDP and other main aggregates of the SNA.

Overall, Statistics Sweden is still concerned about the increasing number of assumptions required to compile some of the recommended changes to the main sequence of economic accounts. More calculations based on assumptions in the core, introduces the risk of reducing international and temporal comparability of key macroeconomic aggregates. Maintaining a high reliability and comparability of the core system of national accounts and their key indicators is essential.

Statistics Sweden welcomes the ongoing work to develop and test practical implementation guidance for some critical recommendations. However, we are of the opinion that even though guidance might mitigate some of the risk, guidelines do not remove the fact that the results are sensitive to the use of assumptions and the presence of available data. In the case of return to capital in the sum of costs approach and the treatment of depletion of natural resources as a production cost we do in addition have strong doubts about the conceptual consistency of the proposed changes.

The inclusion of more analytical elements in the SNA framework needs a transparent structure to organise the multitude of information in the framework. This has been achieved on a principal level by introducing the concepts of 'thematic' and 'extended' accounts. We welcome this as a clear improvement. Nevertheless, the possibility to organise the SNA information content according to these principles have according to our view not been wholly utilised.

In order to support a transparent and user-friendly framework and avoid ambiguities, that otherwise might reduce the credibility of the SNA, we propose that analytical information mainly appear in dedicated tables and accounts separated from the standard accounts of the SNA.

A particular issue of interest is the relevance of the SNA for environmental sustainability analyses. This has been one of the main issues in the update process. The inclusion of more information in the SNA and how the information in the standard accounts can be understood and used for a multitude of analyses has mainly been dictated by the needs related to microeconomic productivity analysis and the IPCC analysis of sustainability (weak sustainability).

To support a multi-purpose use of the SNA we therefore encourage the inclusion of information that also relates the SNA to other perspectives on sustainability. One obvious example is information related to the notion of an environmental debt to future generations and the growth of this debt due to economic activity (strong sustainability).

Nevertheless, we understand that expanding the scope of the SNA will at this stage not be feasible within the time limits of the current SNA update process. An alternative would therefore be to add the issue of environmental debt to the SNA research agenda.

Reliability and relevance of the GDP estimate

The so called 'Irish case' revealed that the GDP estimate is sensitive to the location of units owning IPP and the corresponding payments of licence fees and royalties received by these units. The impact of foreign owned IPP-assets on GDP also led the Central Statistics Office of Ireland to reconsider the usefulness of GDP and develop other indicators, for example the adjusted GNI-measure (GNI*) that is regarded to better describe the development of the Irish economy. GNI* neutralises the impact of licence fees and royalties on GDP and GNI by excluding the IPP income of foreign owned enterprises in the Irish economy and the corresponding consumption of fixed assets related to the IPP.

- **Simon Schuerz**

Comments by the Environmental-Economic Accounts Sections at the Federal Statistical Office of Germany:

Chapter 1:

1.12: Should mention examples regarding environmental sustainability: “A comprehensive assessment of well-being and sustainability requires additional measures, for example, measures relating to safety and governance or to ecosystems and degradation.”

1.65: “Completely uncultivated” can be replaces by “cultivated”, if cultivated/non-cultivated are a dichotomy in the SNA 2025.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Istat appreciates the work done to update the 2008 SNA and to provide this draft of the new manual. We understand the efforts made to include recommendations on the measurement of new economic and social phenomena.
We were unable to read the whole draft of the manual due to important work commitments related to the deadlines for the general revision of national accounts scheduled for the end of September.
However, we have provided some comments and reported inconsistencies in some chapters of the manual.
We will appreciate if the editorial team decides to open the window for further comments.

- **Noemi Frisch _Israel ICBS**

The comments to this document were given by Mrs. Soli Peleg, former Director of the Macroeconomics department at the ICBS

1.23 Do we need to add economic?
1.33 Sequence of economic accounts? – the other tables are also often economic in nature
1.83 economic?

- **Petr Musil**

The Czech Statistical Office welcomes the SNA update to reflect changes in economy. However, we still have several concerns regarding proposed conceptual changes that may leads to deterioration of international comparability. In particular, we oppose inclusion of a return to capital in the sum of cost approach. Michael Wolf provided detailed reasoning.

- **UNSD Ilaria Di Matteo**

Comments from the SEEA Central Framework Technical Committee of the UNCEEA

Please see comments in the main wiki page of the

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

11 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **SE-Michael Wolf_Sweden Statistics Sweden**

We have some general commets that we provide in relation to the introductory chapter.

First of all, regarding the time available for comments it has been impossible scrutinize more than a few topics and therefore we are not able to answer the general questions asked (no. 1 and 2).

Further to the UNSC decision in March 2024:

55/107

National accounts

The Statistical Commission:

/…/

(e) Noted the concerns of some Member States about the impact of selected recommendations, **emphasized the importance of addressing conceptual uncertainties**, and stressed the importance of continuing to develop implementation guidance on the new recommendations to facilitate the implementation of the 2025 SNA in an internationally comparable way;

(emphasis added)

I our view there still exist conceptual issues in the draft 2025SNA that needs to be solved. In particular the valuation of output in the government and NPISH sectors as well as the inclusion of depletion in the production account. These inconsistencies can be solved by moving the proposed changes from the standard accounts to the extended accounts.

The main principles of social accounting

There are at least three basic principles that a social accounting framework should comply with if it aims to be a statistical description of the economy in a society. These are:

- to provide for an accurate physical description of economic events combined with prices as weights to create analytically useful aggregates expressed in monetary terms,
- the definition of social costs as the use of human effort in productive activities and social revenue as value added created by human activity,
- the recording of quantities, prices and values that are observable and possible to collect with statistical methods and thus are objective in the meaning of being independent of the organisations that collects the data and compiles the national accounts.

Some gaps might be filled to make the framework complete, but these should be kept to a minimum.

The main issue regarding the sum-of-costs approach for government output and depletion is that they do not represent social costs or revenue. Including a return on government capital in the valuation of government output is based on the opportunity cost concept, which is a hypothetical cost or revenue depending on the perspective. It is not part actual revenue or actual social costs in the SNA. Humans have not created nature and depletion is therefore not a social cost in the meaning of being the use of human labour effort including goods and services produced by human activity. Nevertheless, these two issues might have analytical interest and therefore can be part of the extended accounts.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The UK strongly advises for this chapter to be reviewed for the logic of its flow, the introduction of technically incorrect revisions to the text and the deletion of material which may be better retained.

The revision of this chapter could be more ambitious. See comments on 1.76.

Specific Paragraph Comments

Para 1.9 - GDP can be clearly related to welfare, as was explained in the old paragraph 1.76 (which is now shown as para 1.4 deleted on page 19). The UK would encourage the retention of the deleted paragraph, which we consider sufficiently clear to explain the issues.

Para 1.36-1.38: the sequencing of the chapters referenced would appear illogical, with these three chapters alone bounding back and forth. Paragraph 1.105 describes this in a way that the chapters are addressed sequentially.

Para 1.69 - We suggest the word 'unpredictable' be inserted in the third sentence before the word 'losses'. Predictable losses caused by destruction by natural disasters is classed as depreciation. See para 7.267 for the correct wording.

1.76 - The failure to think radically about this topic seems to be a fundamental failing of this revision. In the UK we have been able to push forward research on this topic in recent years (see https://escoe-website.s3.amazonaws.com/wp-content/uploads/2024/02/29085951/ESCoE-DP-2024-02.pdf and https://iariw.org/wp-content/uploads/2024/08/IARIW_Heys.pdf) which showcases the real feasibility of being far more ambitious in this space.

The old para 1.9 has been deleted (page 20), but this leaves no place to discuss externalities in this chapter, either those completely excluded or those internalised within market prices of other good (for example, the reason land under dwellings is more highly valued than rural land is because of its proximity to schools, hospitals, road and rail connection and urban green space maintained for recreation). This chapter no longer addresses this phenomenon and the degree to which market prices internalise these externalities is central to the SNA, and hence giving another reason why GDP is a weak measure of economic welfare.

- **Nicola Massarelli_Eurostat**

yes

- **Jorrit Zwijnenburg_OECD**

Yes, only one comment related to paragraph 1.65 which needs to be updated in light of the changes in treatment of biological resources, which define the difference between cultivated and non-cultivated processes differently.

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

11 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

It is clear

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Partially. The chapter refers to supplementary material, which is not available for review.

- **SE-Michael Wolf_Sweden Statistics Sweden**

We think there some clarifications to be added to chapter 1.

Comments: We think that the reference to GDP in para. 1.6 actually is related to GDP in volume. We would like to put more emphasis on volume measure of GDP and its main use as indicator. In order to avoid any misunderstandings between the concepts of volumes and real or purchasing power equivalents a clearer wording is needed. It is not clear what kind of price indices this paragraph refers to, genuine or implicit. It is also unclear what is referred to by ‘a certain reference period’. The weights in the GDP volume at reference year prices are actually from different periods.

We propose the following wording of para. 1.6:

1.6 The volume growth of GDP is the headline indicator of economic performance. GDP also represents the resources made available to the society under a given period (year).Information in nominal terms is usually the starting point in supply and use tables but the real aim, in the SNA, is to enable the compilation of volume measures. Volume measures is the closest to a physical description of the economy we get when the SNA express data on goods and services in prices of a certain base period. In case the previous year is used as the base year a time series of volume growth can be expressed in the prices of a reference period (year). The volume measures are important in analyzing underlying economic activity. Complementing volume measures are measures of price change in the form of price indices, which are also an essential part of the SNA. These assist in the analysis of inflation, and can also be used to derive various analytically useful measures of purchasing power such as 'real' income.

Comments: The paragraph 1.89 links three concepts to each other: **opportunity cost, current cost and replacement cost**. This paragraph was introduced in SNA1993 but unfortunately there is a serious conceptual error in the paragraph by the statement that *in the System of National Accounts (SNA) the opportunity cost concept is used as defined in economics*. The careful reader will notice that the use of opportunity cost in the paragraph is not in line with economics. In economics opportunity cost is the difference between the chosen alternative and the best possible alternative. This difference is the income forgone by choosing a less profitable alternative.

The opportunity cost concept is used to evaluate different investment alternatives, and this necessitates speculation of the outcome of the different investment alternatives. In complex alternatives like investments in productive assets additional information and assumption may be needed. All in all, the opportunity cost concept is an analytical tool and due to its ex ante perspective less useful in statistics.

By current cost recording is meant the recording of costs incurred due to activities undertaken in the current period. When production takes place inputs are recorded as costs regardless of when the payment is made, and the costs are valued according to the corresponding costs for acquiring the goods in the current period. By actual costs is referred to the actual payments for goods and services delivered in the current period and if inputs are taken from the inventory, what it, in the current period, would cost to replace the goods in the inventory. So, in this sense current cost and replacement cost are synonyms.

Current cost accounting is a way of accounting for the actual social cost of human productive activity. When basic prices on goods and services changes due to changes in labour costs or other reasons related to production (like the changes in the cost of extracting and harvesting natural resources) these changes reflect the change in actual social costs. The idea behind current cost accounting is that these changes also will be reflected in the valuation of inputs and output, if basic prices in the reference period, instead of historic acquisition costs, are used to record national accounts entries. This, we think, is one of the cornerstones in a social accounting framework.

In case an investment good is not produced anymore the basic price of the reference period will be missing. This is a situation when the replacement cost concept is useful. Since replacement cost is used to value consumption of fixed assets in the reference period (current prices) we ask what the cost is of replacing the lost production capacity in volume of our investment good. If we know how large this loss is in relation to the total production capacity, we can use the supply price in the reference year of the very same good. If this is missing we need to approximate the supply price by using information of the change in production costs or output prices of the enterprise or activity previously producing our investment good.

To summarise, opportunity cost compares the outcome of different alternatives in the same period whereas replacement cost compares the basic price of the very same good in different periods of time. These two concepts can therefore not be interchangeable as the paragraph 1.89 currently suggests. Furthermore, the opportunity cost is a hypothetical cost and not the same as the actual cost and as such can only be an approximation of the actual cost when data or other information on the actual costs are missing.

We propose the follow wording of para 1.89 (old para. 1.67):

1.89 Business accounts commonly (but not invariably) record costs on an historic basis, partly to ensure that they are completely objective. Historic cost accounting requires goods or assets used in production to be valued by the expenditures actually incurred to acquire those goods or assets, however far back in the past those expenditures took place. In the SNA, however, the concept of current cost is employed. The current cost is estimated at the time the asset or resource is used, as distinct from the costs incurred at some time in the past to acquire the asset. The best practical approximation to the current cost accounting, is when assets and goods used in production are valued at their actual or estimated current market prices at the time the production takes place. In case the asset or good is no longer produced valuation is made by reference to its replacement cost.

Depreciation versus consumption of fixed capital

Comments: The term depreciation differs from consumption of fixed assets in several respects. These include business accounts use of historic costs versus current costs in the SNA and by the term depreciation in microeconomics is understood the market value of a good in relation to the value of a one period (year) older units of the same good noted in the second-hand market. In social accounting (SNA) the replacement cost concept is used meaning the consumed share, of a new item of the investment good that in the future needs to be replaced. The replacement cost method of valuation uses the current prices of new items rather than prices noted on the second-hand market.

As a consequence of changes in 1.89 we propose the follow wording of para 1.91 (old para. 1.69):

1.91 Current cost accounting has ramifications that permeate the entire SNA. It affects all the accounts and balance sheets and their balancing items. A fundamental principle underlying the measurement of gross value added, and hence GDP, is that output and intermediate consumption must be valued at the prices current at the time the production takes place. This implies that goods withdrawn from inventories must be valued at the prices prevailing at the times the goods are withdrawn and not at the prices at which they entered inventories. This method of recording changes in inventories is not commonly used in business accounting, however, and may sometimes give very different results, especially when inventory levels fluctuate while prices are rising. Similarly, consumption of fixed capital in the SNA is calculated on the basis of the estimated current replacement costs of the assets at the time they are used, as distinct from the prices at which the assets were acquired. Even when the fixed assets used up are not actually replaced, the amount of consumption of fixed capital charged as a cost of production should be sufficient to enable the assets to be replaced for a new good of the same kind. When there is persistent inflation, the value of consumption of fixed capital is likely to be much greater than depreciation at historic costs, even if the same assumptions are made in the SNA and in business accounts about the service lives of the assets and their rates of wear and tear and obsolescence. To avoid confusion, the term “consumption of fixed capital” is used in the SNA to distinguish it from “depreciation” as used in economics with a different meaning and typically measured in business accounts.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Para 1.10 “First, other than GDP, there is a very wide range of data and aggregate measures contained within the SNA’s sequence of economic accounts that can be used to inform discussion of wellbeing and sustainability.” It would be useful to give an example of these wide range of data and aggregate measures, as it’s not clear what is meant here, and it’s an important message!

Para 1.41: at the very end it would be helpful to add the full title of chapter 19.

Para 1.60: add reference to chapter 34.D.3, where unpaid household service work is described.

- **Jorrit Zwijnenburg_OECD**

1.9: Reference is made to ‘well-being’ and ‘standard of living’, whereas the 2008 SNA speaks about ‘welfare’. As these are different concepts, it is important to properly explain them, also because the term ‘welfare’ is still used (see for example para. 1.49). Furthermore, later in the handbook (e.g. para 9.68) the text speaks about ‘economic well-being’ and ‘material well-being’. It would be good to be more precise with these terms and apply them consistently throughout. We would suggest to specifically include and define ‘welfare’ and ‘material well-being’ in this paragraph.

1.21: First appearance of “Integrated framework of national accounts”. Should this term be explained, including how it relates to the SNA and the “sequence of economic accounts”? In this regard, we have noticed that the label ‘SNA’ has been changed in some places throughout the draft manual by "Integrated Framework of National Accounts” but not everywhere. In other places, like Chapter 16, there is a reference to the “integrated framework of the SNA” and to “integrated framework of economic accounts”. Furthermore, in Chapter 21, there is a reference to “main sequence of economic accounts”. We recommend to clearly present the distinction between "SNA", "Integrated Framework of National Accounts" and any other similar/related concept upfront, preferably in this paragraph; and to check that the terminology is used consistently throughout the manual.

1.68: “Fuel deposits that have not been discovered or that are unworkable”. It may be better to use the word ‘demonstrated’ or ‘viable’ to align with UN FC. Likewise, ‘economic’

seems a better term than ‘unworkable’.
Could it be useful to also explicitly mention the exclusion of ecosystem assets (also linked to the explicit reference in 1.66 that ecosystem services are not within the production boundary as they do not produce a direct monetary (or perhaps economic?) benefit) and human (and perhaps social) capital here? In that regard, we have to make clear from the start what is in the sequence of economic accounts and what is not.

1.74: Reference to GFCF referring to fixed assets as produced assets such as machinery, equipment etc. No reference is made to any natural capital that could qualify as produced assets.

1.77: First time reference to ‘extended’ and ‘thematic accounts’. However, they are only properly defined in paragraph 1.101. So perhaps it is better to delete the reference to these accounts here or make an explicit reference to 1.101.

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Lenka Valenta_Germany FSO**

> 1.65 Meaning of “<u>completely</u> uncultivated” is not clear (i.e. what is the difference between “completely uncultivated” and just “uncultivated”?), and should be avoided. For accounting purposes, it is important if an economic asset (natural resource) is assessed as cultivated or uncultivated (might be also by convention to some extent).
>
> Furthermore, the sentences *“... Similarly, the natural growth of <u>completely uncultivated forests</u> or wild fruits or berries is not counted as production... However, the deliberate felling of trees in wild <u>completely uncultivated forests</u>, and the gathering of wild fruit or berries, and also firewood, counts as production.*“ should be checked for conceptual consistency against para 11.207.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

12 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

No

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Formatting issues. At the end of paragraph 1.34, it says 'supply use tables' instead of 'supply and use tables.'

In paragraph 1.42, it says 'as mentioned in paragraph 1.xx,' but the paragraph containing the statement being referenced is not found.

In paragraph 1.43, it says 'paragraphs 19.47' instead of 'paragraph 19.47.'

- **Eli Fenichel_US Yale Univ**

A core issue through the SNA revision that needs addressing is the use of the term exchange value. An exchange value is a price times a quantity resulting in a rectangular area. This is different then an exchange price, which is the price at which a good is exchanged. The price concept in the national account exchange framework is identical to the price concept in welfare economics, conditional only on agreement about the accounting boundaries. However, in the past exchange value has at times been used as price or exchange price, leading to lots of confusion. Please do a search of a final document and make sure this terminology is clear.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

Section A ‘Chapter overview’, newly introduced, is useful. It would be useful to add it consistently to all chapters. The title of this section should also be harmonised: sometimes it’s called ‘chapter overview’ like here, sometimes just ‘overview’ as e.g. in chapter 5, in many cases it’s completely missing.

Para 1.65: the two references to "completely uncultivated forests" may be in contradiction with the text in 11.207: "It is recommended to treat these resources as cultivated assets, with all growth of trees which in the future are intended to be used for the purpose of producing timber considered as being established under some form of human involvement, instead of applying a discretionary choice between either managed and controlled or not managed and controlled by economic agents."

- **Floris Jansen _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS:

In **paragraph 1.10** "*Furthermore, the national level information presented in the sequence of economic accounts can be supplemented with data on the distribution of these economic measures across groups of economic units. This is especially relevant for the distribution of income, consumption, saving and wealth across groups of households*." This 'national level information' is a bit misleading as it seems to refer to the 'distribution of these economic measures across groups of economic units' that is also at national level. We presume that supplements to 'national level information' is 'regional level information'.

In **paragraph 1.27c** "*Used by households, government units, the central bank or non-profit institutions serving households (NPISHs) for purposes of final consumption or saving*" How does the central bank work in the functional classification of consumption? This is not clear in other parts of SNA. See for example paragraph 7.169 "*As a consequence, the above services of central banks are considered as non-market output provided to the society as a whole (i.e., collective services), and total output is to be valued at the sum of costs, while compulsory payments by financial corporations to the central bank should be treated as current transfers, and not as purchases of services*". This is particular confusing as phrases like "*society as a whole"* (or "*community at large*") are used in SNA to mean general government (S.13), e.g. in chapter 4 for government assets and in chapter 9 when Taxes versus fees are discussed. Why not consider that the non-market output produced by S.121 is consumed by S.13 as a convention?

In **paragraph 1.39** references Measuring Capital – OECD Manual 2009. It might be better to not refer to specific editions of manual since new versions might be made in between SNA updates.

In **paragraph 1.43** we read "*As explained in paragraphs 19.47, GDP can also be derived from expenditures in an economy, or from the generation of earned income.*" Plural is used for one paragraph. Actually, **paragraph 19.47** is only mentioning two ways to calculate GDP (production and expenditure) while 19.48 mentions the income approach.

In **paragraph 1.46** might be in need of some more proofreading: "*An economy's saving can be used to fund the acquisition of non-financial assets. What is left over is generally available to be lent in the form of the net acquisition of financial assets (i.e., the acquisition of financial assets less the incurrence of financial liabilities).*" When talking about 'net' in financial transactions it isn't deducting liabilities from assets, but rather the increase minus the decrease of assets and liabilities respectively. Therefore the net acquisition of financial assets can be negative without anything happening at the liability side of the balance sheet. Also it is not clear why 'generally' is used, is it to disregard capital transfers in the first part of the paragraph – this is rather awkward, better to spell it out. Also, 'net financial transactions' could be introduced as a term in the second last sentence.

"If the value of an economy's acquisition of non-financial assets is greater than its saving, then the economy is a net borrower as the incurrence of financial liabilities must exceed the acquisition of financial assets to fund the acquisition of the non-financial assets." Therefore, 'net' is missing before acquisition here.

"Thus, net lending/borrowing can be derived by deducting the acquisition less disposals of non-financial assets from saving, and adding capital transfers receivable less capital transfers payable from the rest of the world to saving. When net saving is used in the calculation, depreciation and depletion are added in as these are recorded as negative expenditures as they represent a source of funds for the acquisition of assets." This sentence is not easy to understand since P.51c is recorded positively on the uses side (unfortunately now proposed to be called expenditure) as part of P.51g. Is meant that in the acquisition of non-financial assets account P.51c reduces the value of the asset? In general it might be considered to use the wording of ESA 2010 paragraph 3.145 which are very clear in my view stating that: *Recording 'gross' means without deducting consumption of fixed capital, while recording 'net' means after deducting consumption of fixed capital*.

"*Net lending/net borrowing can also be derived as the acquisition of financial assets less the incurrence of financial liabilities. The fact that net lending/borrowing can be derived in two ways is important in balancing the accounts, as described in chapter 19*." This 'Balancing' of B.9 / B.9F is absolutely not recommendable and in contradiction with chapter 12. Discrepancies should be shown not 'balanced' away. Especially for S.13 data we don't want any balancing between B.9 and B.9F, but this should hold true for all other sectors. The discrepancies should be published as it is one (the only) numerical indication for data quality. As a matter a fact a discussion on the fine line between enriching your compilation by using many data sources and hiding discrepancies is warranted.

In **paragraph 1.66** now reads: "*These examples show that many activities or processes that may be of benefit to institutional units, both as producers and consumers, are not processes of production in an economic sense. Rainfall may be vital to the agricultural production of a country but it is not a process of production whose output can be included in GDP. Similarly, a range of ecosystem services that do not produce any direct monetary benefit are excluded. However, as explained in chapter 34 Measuring well-being, the compilation of complementary accounts covering ecosystem services according to the System of Environmental- Economic Accounting Ecosystem Accounting 2021 is encouraged*". This new argument seems not sound. Arguably these ecosystem services (for example bees pollinating is mentioned in **paragraph 2.87**) do produce a direct monetary benefit for farmers etc., however they are sometimes not production if they do not imply a (human) activity. In other words there is no mutual agreement that is a necessity for all transactions. In still other words, if you would have a company or government that would set up bee hives in order to pollinate this would be considered production in SNA although the process is the same as the 'ecosystem service' that is outside the boundary.

In **paragraph 1.81** *The IMF's Government Finance Statistics Manual (GFSM) 2014, which describes the government finance statistics (GFS) framework, designed to support fiscal analysis. Further information on the GFSM is provided in chapter 31*. First it seems a wrong reference as chapter 31 is about NPISH. Second, if chapter 30 is meant we recommend that it is clearly stated that GFSM is deviating from SNA on some crucial parts (e.g. FISIM, own account capital formation, consolidation, unfunded employment-related pension funds, transfers in kind) and that chapter 30 should follow the SNA sequence of accounts in this respect (see GFSM 2014 annex 7). Therefore, to avoid giving the impression the chapter 30 is based on GFSM, and to eliminate confusion in section C of chapter 30 it might be better not to refer to GFSM in chapter 30 but just to the annex 1. This would also be symmetric to GFSM where the differences with SNA are discussed in an annex not the main part of the manual.

- **María Marcela Harriague_INDEC Argentina**

No

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

1.22: It is not clear why 'goods and services account' is presented separately and not just as part of the current accounts?

1.30: "Accumulation of assets accounts". What about liabilities?

1.35: The label above 1.35 refers to 'Accounts in volume terms', but as explained in 3.47, this only holds for the production and goods and services account and not for the other accounts. For that reason, wouldn't it be better to refer to 'Accounts in real terms'?

1.38: "or depletion in the case of natural resource". Are all natural resources non-produced?

1.45: The adjustment for pension entitlements should also be mentioned in the second sentence when explaining how to derive savings.

1.66: Reference is made to 'complementary accounts', but this doesn't seem to be a common term (i.e., the term is only used twice throughout the document). Should it refer to 'thematic' or 'extended' accounts instead? Otherwise, it would be good to introduce this term.

1.68: Reference is made to "uncultivated forests". This needs to be adjusted as all forests are now considered cultivated.

- **Lenka Valenta_Germany FSO**

1.33 This paragraph should clearly define what is exactly meant under "integrated framework of national accounts". We understand that "integrated framework" includes 1. Sequence of economic accounts + 2. Other parts of the integrated framework. Four examples for those other parts are given in the following paragraphs (1.34-1.38), but not a complete list.

As this term is crucial (also in the context of implementation strategy), all parts of the integrated framework should be indicated here (also useful for Ch2), while more details then in Ch3.

In addition, heading for paras 1.33-1.38: "Other <u>tables</u> of the integrated framework of national accounts" should be adjusted as "Other tables and <u>accounts</u> of the integrated framework" or "Other parts of the integrated framework" (as it includes e.g. "<u>Accounts</u> in volume terms").

Para 1.39 predominantly focuses on (issues of) depreciation, while depletion (new element in net measures) seems to be rather left behind. A couple of basic sentences concerning depletion would be useful to balance it. In addition, 2009 OECD Manual on Measuring capital is mentioned here due to depreciation, however no reference is made as regards measuring depletion. SEEA-CF 2012 could be possibly mentioned in this respect.

In addition, as mentioned also in para 3.143, there are not only difficulties in measuring depreciation, but there are now (even greater) concerns - for measuring depletion.

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4 Do you have any other concerns with this chapter?

12 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Brief elaborations on informal economy with relation of SNA

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

It could be included within the Introduction, a paragraph specifying what is new in the SCN-25 and some reasons that justify its inclusion. Perhaps a parallel table showing the before and after of the SCN. Additionally, the chapter refers to supplementary material, which is not available for review.

In paragraph 1.6, the complementary volume measurements imply that more transactions in the sequence of accounts, beyond income, are estimated in real terms. It is necessary to mention which ones and which price or volume measures would be recommended.

In paragraph 1.12, it is advisable to mention the recommended global frameworks for well-being and sustainability.

In paragraph 1.26, the concept of 'depreciation' is introduced, replacing 'consumption of fixed capital'. It is important to mention the motivation for the change and what it implies in conceptual, methodological, and measurement terms.

In paragraph 1.31, it is suggested to refer to access to financial services instead of banking.

In paragraph 1.38, it is necessary to clarify whether the term depreciation refers to the consumption of fixed capital. If not, what would be the scope and implications of this change in the national accounting guidelines?

In paragraph 1.56, it is pertinent to mention which classifications and nomenclatures recommended in this manual are articulated and harmonized with those used by other international organizations.

In paragraph 1.59, it is suggested to include an example of products and services that are not sold but are disposed of in other ways.

In paragraph 1.78, it is useful to mention how the treatment of this type of gross fixed capital formation (by repair and maintenance) would be harmonized with the concept of depreciation and/or consumption of fixed capital.

In paragraph 1.86, if standardized tables for micro-macro reconciliation of figures exist, it is necessary to mention and make them visible.

In paragraph 1.91, it is necessary to clarify whether the term depreciation refers to the consumption of fixed capital. If not, what would be the scope and implications of this change in the national accounting guidelines? Likewise, it is highly useful to explain if the SCN will no longer use the term 'consumption of fixed capital' to differentiate it from the accounting concept of depreciation, along with the technical justification for the change.

In paragraph 1.95, it is important to expand the convergence of accounting standards (GAAP-IFRS) as a classification tool for accounting items and their alignment with national accounting transactions.

In paragraph 1.101, the concepts of 'thematic accounts' and 'extended accounts' are introduced, replacing 'satellite accounts'. It is important to mention the motivation for the change and what it implies in conceptual, methodological, and measurement terms.

- **Sarah La Rosa Belgium National Bank of Belgium**

We suggest to adapt the new proposed paragraph 1.9: *"The institutionalization of economic data in decision making through the accounting structures provided by the SNA has established credible, comparable and authoritative measures of economic activity suitable for all countries. One effect of this institutionalization has been the wide-spread use of national accounts measures of economic activity, in particular GDP, as indicators of the general performance of a country.",* and not to mention "*including its people's well-being and standard of living."* as the instutitionalised uses of these indicators, in the framework of the 2008 SNA, are quite limited in comparison with the GDP and other economic indicators. Moreover, the last sentence of the paragraph *"This has occurred* *notwithstanding the routine advice of compilers of national accounts that GDP and similar measures of aggregate economic performance cannot and should not be considered a direct measure of well-being, economic or general."* does not provide any contribution to the debate and should be deleted.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

Para 1.81 includes a number of precise references to other macroeconomic manuals that will unavoidably become obsolete (plans are being made to update the GFS manual and the SEEA CF). Include generic references to these manuals, without mentioning the exact version? Same for the classifications?

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

1

Paragraph 1.27

In item b, we suggest adding that it also includes property income:

b. Distributed to institutional units with claims on the value added created by production; or by ownership of asset.

2

We suggest including in this first chapter a summary of the changes that, starting with this manual, are introduced in each of the accounts of the system.

- **Jorrit Zwijnenburg_OECD**

1.3: It may be useful to also include a reference to NDP if we want to put more emphasis on this specific measure. The same goes for paragraphs 1.5, 1.14, 1.71 and 1.72.

- **Amanda Driver_SA_Biodiversity Consultant**

1.81

Fourth bullet refers to SEEA CF and SEEA EA.

"The SEEA CF is complemented by the SEEA Ecosystem Accounting 2021 (SEEA EA), which provides an integrated and comprehensive statistical framework for *organizing data about habitats and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets*, and linking this information to economic and other human activity"

This language is not consistent with SEEA EA. Suggest replacing "organising data about habitat and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets" with "organising data about ecosystem assets and the services they provide"

Avoid using "habitat" as a substitute for "ecosystems" – it has a different meaning.

SEEA EA is careful to avoid terrestrial bias – if the term "landscapes" is used in a general sense it should always be "landscapes and seascapes".

- **Lenka Valenta_Germany FSO**

1.11 Many "environmental stock as and flows" are covered by the sequence of economic accounts. What is beyond in this sense are ecosystem assets and accounting for those ecosystem flows, which do not produce direct monetary benefits. The same comments apply to para 2.6.

1.35 - 1.36 (Accounts in volume terms) referring to chapter 18, could be positioned as last to keep references to chapters in this section in ascending order (15, 16, 17, 18, similarly as in para 1.105).

1.68 General remark on the term "fixed assets" – as the asset classification has been considerably revamped, "fixed assets" are now covered partly under AN.11(Fixed assets (excluding produced natural capital)) and AN.31xx (under Natural resources), which may not be obvious to all users. Thus, it should be explained (not necessarily here), as it is also important in the context of depreciation (only fixed assets can be depreciated).

1.81 Apart BPM7, this paragraph will become obsolete soon and should be presented in another form like “latest edition of XX”. In addition, after publishing 2025 SNA, some of these standards will not be consistent with SNA (anymore).

Chapter 2: National accounts and measures of wellbeing and sustainability

4 Comments

- **Eli Fenichel_US Yale Univ**

A general issue in this section is the term well-being is not clearly defined upfront. The term welfare appears occasionally, but is the term in other chapters. What is the relationship between well-being and welfare?

2.1 -- Style question. I believe this should written in 3rd person not second person. (We v Societies). This should also emphasize that these are market adjacent, but not well addressed in the market.

2.14 -- This would be a good place to point that welfare is narrow than wellbeing, but covers a substantial area related to consumption related tradeoffs within and beyond the market.

2.15 – The term economic capital should not be used. The term produced capital (or built capital) would be better. Natural and human capital are also economic capital.

2.15 - social capital is not measurable in the same way human and natural capital are. Dasgupta is very clear that social capital is really more about institutional design. It is not a good term. Dasgupta, P., 2001, Human well-being and the natural environment. Oxford University Press, New York.

2.16 (Box last two bullets) -- these two seem fundamentally different. The first is not grounded in any economic theory. The second is really trying to solve a different problem. Not clear this will age well.

2.17 -- this is not a sufficiently clear definition. Do you mean welfare? If so, does actual willingness to pay, i.e., give up material consumption for non-market services affect welfare or wellbeing. This needs to be clarified. I recommend, well-being or 'material well-being' aligns with the economic notion of welfare. This includes consumption or non-consumptive decisions that influence consumption.

2.18 -- what about environmental quality experienced. It is well documented that environmental quality influences housing location choices and capitalizes into home prices.

2.19 – “Of particular importance are measures of unpaid household service work, such as concerning child

care and food and meal preparation and environmental quality experienced.”

2.20 - collecting such data also supports future price imputation.

2.22 – Please clearly says that sustainability relates to changes over time rather than levels please.

2.23 – “The measurement of economic produced capital falls within the scope of the SNA sequence of economic

accounts and encompasses produced non-financial assets, non-produced non-financial assets (e.g. contracts,

leases and licences [sp]) and financial assets and liabilities while excluding natural resources which are included

under natural capital.” This is not correct. There is natural capital that is included within the non-produced non-financial assets. Something is very confused here.

2.24 – not sure what it means for something to be “more comprehensive?” Something is or is not comprehensive.

2.36 – The last sentence, "Nonetheless…" This is sentence confuses a number of points, because it is feasible and in scope to do monetary values for many of these stocks.

2.37 -- again produced is better than economic because natural and human capital are economic capital. Social capital should be removed from this sentence.

2.39 -- again, the use of the term wellbeing is confusing because it is not clear if it is used simultaneously with welfare. If it is, then some early national accounting attempts were attempts at Hicksian income, which makes the claim here disputable.

2.40 -- doesn't this ultimately just boil down to the breakdown being incomplete accounting in some places and potential double counting in others. This is not a theoretical challenge but a technical implementation challenge. It is also the case that welfare may not be the most helpful measure for proximate macroeconomic fiscal discussions, which is why some contributions to welfare may be omitted.

2.41 -- this really just speaks to a political-economic general equilibrium, but one where margins are not equalized because of voter rules.

2.45 -- This should be taken further, if the same outcomes require substantially greater output, then the opportunity cost of the inefficient system is very real, but could still lead to greater GDP growth.

2.48 -- This is not 100% correct. To the extent that these values capitalize into real estate prices, then they are reflected in the economy. They are also reflected in the economy to the extend governments protect these sites, which may influence the broader land market.

What is not included in the SNA are spiritual and cultural values for which no price is paid.

2.48 – what are called "welfare values" here are often net measures.

2.51 - some ecosystem services. There are certainly some ecosystem services within the boundary. Others are intermediate products that really just need disaggregation.

2.58 – “government such as law and order, environmental quality, and …”

2.71 - excluding biomass energy? This is confusing. It might be clearer to simply note that biomass energy was already included in the SNA, so this is not a new extension.

2.71 – “depletion of natural resources…” -- this is great.

2.80 -- (figure) - figure is confusing because there are some things that both in the SNA and the complement accounts, especially around natural resources.

2.86 -- It would be good to add: It is also possible that over time we will learn that such flows may be relevant for macro-economic decision making including budget forecasting.

- **Simon Schuerz**

Comments by the Environmental-Economic Accounts Sections at the Federal Statistical Office of Germany:

Chapter 2:

2.15: It should be stressed that from an accounting perspective, the link between well-being and sustainability can be reflected by recording data in both physical and monetary terms.

2.24: This is paragraph is slightly misleading. It is not that the SEEA offers “broader” measures of natural capital. Instead the SNA is only measuring some elements (by its own definition of natural capital). Only complemented by the SEEA accounts can these elements inform on comprehensive well-being and sustainability.

2.30: Degradation and how to measure it is not defined here and it is not clear, whether any current statistical standard accounting approach provides an appropriate measurement framework. Depletion is either referred to as a subset of degradation (SEEA CF), or as distinct concept (depletion: economic value of a quantity reduction; degradation: economic value of damage to natural capital quality).

2.62: Replace “a component of the value of natural capital” by “natural resources”. It should be called as what it is.

General comment on Chapter 2:

It should be made clear that the SNA is a system for measuring economic activity and not a concept for measuring sustainability, nor is it intended to become one in the future.

- **Noemi Frisch _Israel ICBS**

2.1 “there can be no doubting….” Perhaps the sentence is not needed
“we face..” who are we? Perhaps “the world faces..”
2.15 “a range of capitals economic, natural..” is economic=produced? Does not seem right. Should be defined precisely. The definition appears in 2.23 – should be at the beginning.
2.37 if changed to “economic” then “including financial” should be deleted
2.57 here “material” instead of “economic” - a new concept
2.62 here talking of “value of natural capital” shows that the use of “economic capital” vs natural capital may perhaps be misleading

- **UNSD Ilaria Di Matteo**

Comments from the SEEA Central Framework Technical Committee of the UNCEEA

Please see comments in the main wiki page of the

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

10 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes: The revisions to the chapter seem to address a lot of the specific, particular issues the UK had with the chapter.

- **Nicola Massarelli_Eurostat**

Chapter 2 makes inadequate reference to the fact that the classification for natural resources is new, and then describes it in a confusing way. Para 2.22 introduces the term ‘economic’ capital, suggesting that economic capital is AN1 and AN2, and not AN3 (natural capital), but without reference to the fact that this is classification designed for analysis of sustainability, not for the SNA. Para 2.23 goes on to describe the scope and sub-classes of ‘economic’ capital. The term is discussed at some length in Chapter 35 with an excellent diagram – Fig 35.1 – and to avoid confusion this should be made clear and reference made to Chap 35. Also, Chapter 35 makes clear that natural resources are inside the production boundary because economic benefits flow from their use, ie in an SNA sense they are economic assets, and so it is confusing to suggest in Chapter 2 that they are not ‘economic’.

- **Jorrit Zwijnenburg_OECD**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Not all recommendations were agreed as far as Italy is concerned, nevertheless the recommendations have been clearly reflected.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

10 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes however the UK have flagged some paragraphs.

2.40: The UK would continue to dispute the content of paragraph 2.40 - GDP is a partial measure of welfare, but given the method of converting to volume, it cannot be anything other than a measure of welfare, by definition. The articulation in the first sentence of paragraph 1.76 of the 2008 version of the SNA remains technically correct.

2.93: As a country which has been successfully compiling these data since 2005, the argument they are excluded 'due to challenges in measurement' doesn't seem to be strong enough.

2.97: is an excellent articulation of why extended tables are an insufficient response to an issue of this magnitude.

- **Jorrit Zwijnenburg_OECD**

2.36: Examples are provided of non-monetary information after which it is explained that this may lead to more comprehensive linkages between the economy and the environment, but the examples go beyond the environment. Thus, maybe reference should also be made to ‘society’ or the sentence may need to be rephrased.

2.73: “Supply and use tables, balance sheets and asset accounts”. What is the difference between the latter two?

Figure 2.1:

- The figure refers to “(Supply and Use tables) under ‘Production, income, consumption, saving’. As people may misinterpret this as all of this information being captured in SUTs, we would suggest changing that reference to “(including Supply and Use tables)”. A related question is whether reference should also be made to IO Tables (as part of the SNA sequence of accounts or as thematic account)?
- We suggest to change ‘accounts that complement the SNA sequence of accounts’ into thematic and extended accounts as these are the new terms used.
- The figure seems to imply that unpaid household service work accounts and environmental flows accounts only relate to ‘production, income, consumption, saving’, whereas education and training accounts, health care accounts and environmental transactions also relate to capital and financial accounts. However, unpaid household service work and environmental flow accounts may also have links to capital accounts (i.e., via the use of consumer durables and the impact on stock measures respectively). Furthermore, I assume that the difference between environmental flow accounts and environmental transactions is that the former are covering non-monetary information and the latter monetary information. But such a split is also relevant for unpaid household service work. Furthermore, is ‘environmental transactions’ the correct terminology to refer to the relevant accounts (maybe ‘accounts for environmental transactions’)
- Somewhat more text on how to read the figure may be useful. In that, we suggest to align the order of text boxes in the figure with the order followed in the text (e.g., it is confusing that “labour market tables” are portrayed as part of the SNA sequence of economic accounts, while the section Labour (para 2.89 and 2.90) is placed between SEEA and Health care which suggests it is a thematic or extended account.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Although the discussion is in general clear, one distinction of fundamental importance, and the consequent necessary clarification, would require a dedicated subsection: while the merits and limits of the accounting approach are thoroughly discussed, the reader gets the impression that the SNA encompasses accounting in general, while it should be made clear that it primarily deals with accounting in monetary terms. Some elements are given here and there in the chapter, but a specific discussion of the unique features of the monetary measurement unit is lacking, while specific (and substantial) limits of using this measurement unit in relation to well-being and sustainability should be highlighted especially in sections A and C. Often these limits are mentioned, but attributed to the accounting approach (of which the chapter appropriately praises the application to non-monetary measures), while in reality they are specific to the measurement unit. To complete the discussion, the following would also be useful: (i) some paragraphs on which non-monetary measures are directly included in the SNA, that are immediately relevant for well-being and sustainability analysis; (ii) some paragraph highlighting (through examples) that several non-monetary values can be found in extended accounts that are fully compliant with SNA boundaries, accounting rules other than valuation and classifications, so directly comparable and fit for joint use with monetary aggregates, input-output analysis and the like; (iii) a comparison between former SNA versions and the current ones as for the direct inclusion of non-montary measures.

- **Lenka Valenta_Germany FSO**

2.30 As regards "*...depletion, degradation and depreciation of a system´s stocks...*", it is not very clear what "degradation" conceptually represents in the context of the SNA (degradation mentioned also in paras 3.143, 7.265, etc.).

On one hand, degradation seems to be put on a par with depletion (e.g. in Table 27.1), on the other hand degradation is given as an example for recording of other volume changes (see para 13.31).

The SEEA-CF (5.90) considers then depletion as a specific form of degradation.

Thus, we wonder, how is degradation defined for SNA purposes including what is the difference between depletion and degradation in the SNA framework.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

12 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

No

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

The overall issue remains around the general positioning of the SNA in regard to well-being; it seeks to be a framework which incorporates account-based measures of well-being but is very unambitious in doing so, and shying away from recommending some steps in deriving such internationally comparative measures may indicate a lack of priority for such measures.

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

- **Floris Jansen _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS:

In **paragraph 2.1** we read: "*There can be no doubting the relevance of measuring wellbeing and sustainability for all countries*", what is the idea behind this sentence? It seems a justification for this chapter (and proposed chapter 34/35) without giving an actual justification like "measuring wellbeing and sustainability is important to understand and compare economies and societies”? It is too absolute too. The paragraph continues: “***We** face a real and growing range of economic, social and environmental challenges including poverty and food insecurity, social and health inequality, climate change and biodiversity loss.”* It seems inappropriate to us to write a statistical manual in the plural first-person pronoun form, except for the foreword. Who does the ‘we’ represent that faces all these problems? The authors? The international institutions? The statistical community? The 2008 SNA has two cases of ‘we’, one in the foreword and one in paragraph 20.23 in a pedagogic sense. Please also verify the we-use in footnote 3 of chapter 21 and **paragraphs 36.72 and 36.85**. The paragraph continues: “*In different but related ways these challenges affect our capacity to satisfy the needs of current generations (wellbeing) and to ensure future generations can satisfy their needs (sustainability)”.* Why in a different way? Poverty and food insecurity, social and health inequality, climate change and biodiversity loss seem to have a direct impact in how we satisfy the needs of current generations (wellbeing) and to ensure future generations can satisfy their needs. The paragraph ends with: “*Developing and implementing solutions to these challenges requires that a significant focus be given to the relevant measurement issues by the community of official statisticians and other experts.*” ‘The relevant measurement issues’ seems to refer to something, but it is unclear what issues are meant. Lastly, as ‘focus’ means ‘center of interest or activity’ it is not clear what ‘significant focus’ could mean.

In paragraph 2.5 it is written: “*For example, measures of household income and wealth may be disaggregated by type of household, gender and other characteristics*”. Is with ‘type of household’ the breakdown meant as described in 2008 SNA 4.158-4.165 and that ‘gender and other characteristics’ will be added to this list. Is gender added as part of the ‘reference person’ classification’? In a new SNA, the reference person should be better described as 2008 SNA paragraph 4.163 is ambiguous. Is it based on income or on consumption decisions? Furthermore, ‘other characters’ is vague and it might be better to give a complete list. Is for example the same social-demographic characteristics as listed in paragraph 2.16 meant? Since the various breakdowns in guidance note WS.2 are called ‘possible breakdowns’, it might be better to use this phrase instead also to signal that it might not be possible to compile such breakdown due to (pragmatic) considerations.

In **paragraph 2.9** mentions “*further research might focus*”. Is this in anticipation of the research agenda (annex 4 in 2008 SNA)? It is furthermore not clear what is meant with “*wider framework*” and “*recording multiple value perspectives*”. Is with ‘*multiple value perspectives*’ the different valuations of assets meant (e.g. market value, nominal value face value, book value or fair value or net present value)? Or is the consumer surplus meant that adds to the 'exchange values' for individual consumers meant (paragraph 2.48)?

In **paragraphs 2.11-2.13** on conceptual framing of wellbeing and sustainability, it becomes clear that two 'entry points' for "*framing the concepts are considered most relevant*". These two 'entry points' are the work of the joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development (UNECE, 2015) and the 1987 Brundtland Commission report. It is not clear if the other references in Box 1 are needed, as they are not part of these 'entry points'. This box seems a rather arbitrary list, as it is not clear why these are mentioned while others are not, such as the Canberra report of 2011 mentioned in guidance Note WS 2. Maybe it is better to put such a list in an annex at the end of the manual or leave it out altogether if it was just inspirational to the development of this chapter.

In **paragraphs 2.11** we read "*These will include the supply (or loss of) nonmarket benefits including those sourced from the environment, from unpaid household service work, and from the connections and relationships people hold with each other*." We note that this use of '*non-market*' is different from the concepts used to describe non-market production and producers. As a matter affect it seems to describe phenomena that are outside the concept of SNA. It is unnecessary confusing to use such crucial SNA terminology for a phenomenon that is not measured in SNA.

On **paragraph 2.18** when discussing more details for household consumption regarding the goods and services consumed it might be useful to refer to COICOP.

On **paragraph 2.20** it seems that with 'non-monetary' terms for measuring wellbeing the volume component of transactions is meant (quantities consumed, hours worked, etc). It is not clear what the purpose of this paragraph is as the usefulness (or necessity) of measuring volumes is well established. Moreover, this use of 'non-monetary' is confusingly different from the 'non-monetary' as described in 2008 SNA paragraphs 3.75-3.90 that is reserved to describe barter, remuneration in kind, payments in kind other than compensation in kind and transfers in kind. The SNA editors should not use one term to describe two different phenomena and hence should find another word.

Paragraph 2.21 mentions "*income and wealth deciles/quintiles, household type, home ownership status, gender, age group, education level or employment status*" as socio-demographic characteristics. Where does the list come from? We note that guidance note WS.2 has similar but different lists, for example in paragraphs 45 and 87 of this guidance note.

Paragraph 2.24 we read "*The scope of the SEEA covers natural resources, land and ecosystems and includes measurement of (i) the non-market ecosystem services supplied by ecosystems (e.g. global climate regulation, air filtration and water regulation); (ii) the pressures exerted on the environment through economic and human activity (e.g. flows of air pollutants, solid waste, wastewater); (iii) the changes in the condition of ecosystems due to human activity, both positive and negative; and (iv) responses by economic units in terms of expenditures, taxes, subsidies and other flows recorded but not separately identified in the sequence of economic accounts*". It seems that the notion of 'non-market ecosystem services' does not stem from the central framework but is mentioned in the SEEA Experimental Ecosystem Accounting framework (paragraph 5.95. As the SEEA consist of more than one framework it seems better to be precise what SEEA framework is referred to instead of 'the SEAA' for transparency reasons. Furthermore, is this the same notion as non-market as used in 2008 SNA (paragraphs 6.128-6.132) as this is not clear to us from SEEA Experimental Ecosystem Framework paragraph 1.3. If this is not the same notion of 'non-market', another term should be found in order to mitigate the current confusion. If this is the same notion of 'non-market', and thus entering government production and consumption, what is the link with COFOG, in particular with division 05 (environmental protection) and division 06 (housing and community amenities)? Is there a link to be made between the activities mentioned in the above sentence and ISIC? Finally, is there a link to the newly proposed (memorandum) item 'ecosystem asset'?

On **paragraph 2.31** it is written "*Consistently applying the same measurement boundaries over time provides a pragmatic system boundary to underpin analysis. For example, establishing the boundaries of economic territory consistently across countries allows interactions between these economic systems to be recorded coherently. The connections across different accounts are further reinforced through the consistent use of classifications, for example of economic units and products.*" One of the great innovations of the 2008 SNA was that physical moves across the boundaries of a territory no longer determining exports/imports but rather the change of ownership, so this seems perhaps not correct – or is something else meant with "*interactions between these economic* *systems*"? Furthermore, the wording '*allows'* seems to suggest that as long as boundaries of economic territory are well established, a coherent Balance of Payment can be drawn up as a sufficient condition. This seems not the case as the following sentence illustrates. Finally it is not clear what is meant with 'pragmatic system boundary'. As the word 'pragmatic' is often used by compilers to deviation from the normal accounting rules (e.g. due to lack of source data) it should be well explained what it means.

On **paragraph 2.32** it is written "*While measurement boundaries may change, accounting approaches retain the benefits provided through a systematic recording of stocks and flows, i.e., consistency, coherence, comparability and repeatability*". It is not clear why these 'measurement boundaries' change especially since in the paragraph before it is promoted to *"Consistently applying the same measurement boundaries over time"*. It might be that the 'alternative measurement boundaries' are meant here, but our understanding (e.g. paragraph 2.38) is that this alternative data collection is supplementary to the core SNA, i.e. it doesn't change the other 'measurement boundaries'.

On **paragraph 2.33** the link between 'unpaid household work' and 'measures of health care expenditure' is not immediately apparent. Is it meant that the care of one household member to another household member could be considered as 'missed' production in the SNA, similar to cooking your own meals? Is it meant that monetary expenditure on health care is a substitute to providing the service within the household? Indeed, it can be considered a substitute in the same sense that taking the train is a substitute for taking the car. However, it cannot be considered the same service as the provision of care by a professional is not the same as the service provided by your loved one within the household. Furthermore, reasoning from an opportunity cost point of view it implies that when the service is provided within the household instead of bought from a health care provided, the value of this internal service should be valued higher than the tariff of the health care provider?

In **paragraph 2.37** the concept of wealth accounting as a broader monetary measure that is accounting-based is introduced as being a useful concept for policy making. It is written that it is used for "*measures of comprehensive and inclusive wealth by the World Bank and UNEP, as well as work at national level in a range of countries*". What is meant with 'comprehensive and inclusive wealth'? Is it the same concept of inclusion as in **paragraph 16.105** on unpaid services for own final use by households?

We note that now in **paragraph 2.40** the phrases “relative marginal costs of production” and “relative marginal benefits or utilities” are used instead of “relative costs of production” and “relative benefits or utilities”. We propose to delete ‘relative’ as in micro-economic theory determining prices in a prefect market setting it is the marginal cost and the marginal utility that sets the price. Also it is not clear to what such marginal costs are relative to? Furthermore, what seems missing here is a sentence to say that a macro-economic framework such as the SNA is not designed to measure micro-economic (individual) utilities of consumers and companies. Also, it seems a big leap to go from marginal costs (which is a micro-economic concept at individual consumer/producer level) to aggregated production and demand (which is a macro-economic concept, i.e. the sum of all producers and consumers) to well-being without further explanation.

In **paragraph 2.45**, the distinction between ‘outputs’ and ‘outcomes’ is discussed. It seems to argue once more that the consumer surplus (called the outcome) received from consuming the medicine (the value of an improved length and quality of life) is larger than the price paid (dubbed ‘exchange value’ in the new SNA) to obtain the medicine (being the output of producers). It could be mentioned that this consumer (and producer) surplus exists on all products consumed not just health products and that it is a prerequisite for a transaction to occur on the open market as prices are set up to the point where the individual producer and consumer has no more surplus (see discussion on ‘marginal’ above). However the SNA is a macro-economic framework that is not designed for measuring such surpluses on micro-economic level.

Paragraph 2.47 reads “*Third, the measurement of material well-being discussed here does not encompass the recording of data on spiritual and cultural values or values and preferences with respect to the environment and nature. Some aspects of these values may be reflected in measures of subjective well-being and some aspects will be reflected in measures of stocks and flows related to natural capital in biophysical terms. However, while these values will be relevant in an overall assessment of well-being, the incorporation of them within an accounting framing requires further investigation*”. It is not clear how (and which) aspects of spiritual and cultural values or values and preferences with respect to the environment and nature are reflected in measures of stocks in biophysical terms. If these spiritual and cultural values are reflected in market (exchange) value, we could agree, if this isn't meant we disagree as SNA should not favour one spiritual or cultural value over another.

Paragraph 2.53 Now we read: "*Four Three areas are introduced in this section: measures of income and consumption, measures of wealth, and measures of distributions across households and measures concerning the environment*." First, arguably these are five areas not four as there is no a priori reason to group income (most important balancing item disposable income B.6) and consumption (P.4). Second, it seems better from a sequence of economic accounts point of view to put 'wealth' after 'distribution'.

Paragraph 2.58 uses 'public goods' where it means 'goods for collective consumption' similarly to existing passages in 2008 SNA which describe the delineation between individual and collective consumption expenditure. This is good but then the term public goods should be avoided in **paragraph 2.66**, where both individual and collective services are mentioned. In paragraph 2.58, in the second last sentence "government consumption" should be changed to "government (actual final) consumption".

On **paragraph 2.62** "investment" is equated to "capital formation". Please use the correct wording 'gross fixed capital formation' (if our proposal is not accepted to drop the 'gross' part in the new SNA as it is fundamentally a net transaction due to disposals). Please reconsider the use of 'investment' throughout the chapter (see also **paragraph 2.66**) in this way as this is often used to include or solely mean financial assets. Also in the use of 'investment income' (2008 SNA paragraph 7.108) it refers to financial assets.

In **paragraph 2.66** it is not clear what 'determining capacity gaps' means in this context. Also, when discussing the "support the supply of public goods and services (e.g., investments in roads, hospitals, schools, energy and water supply, etc.)" it might be good to refer to COFOG. However, a compilation of capital stock along the lines of these categories seems rather challenging, and it is not so clear, what the benefit in comparison to already developed capital stocks by industry is.

The following sentence in **paragraph 2.54** is unclear: "*Such spatial information can be of high relevance in understanding the variation in trends in well-being across a country but* *also in terms of supporting policy responses in cases of catastrophic events such as floods, hurricanes and storms*". Is meant that the impact of such catastrophic events could be measured and aid the policy responses to the disaster? Such spatial information normally comes with a very large time lag. For example, in Europe the transmission to Eurostat of national account data per region of household accounts (NUTS level 2) is done with a two-year delay. That seems too late to help for most policy responses. If regional data is to be used to assess the vulnerability before the catastrophe indeed such regional data can be used.

The following sentence in **paragraph 2.70** is unclear: "*As well, the sequence of economic accounts contains data on transactions that can be associated with the environment such as environmental protection expenditure (and associated financing arrangements), environmental taxes and subsidies and payments for access to resources*". Is COFOG division 5 meant with environmental protection expenditure? Please note that COFOG at group level is readily identifiable in standard presentations of the economic accounts in Europe. If this COFOG division is meant, please rephrase the term 'financing arrangement' as it can easily be misunderstood as to include financial transactions that are not part of the expenditure definition in SNA. If COFOG is not meant, please use another term to avoid confusion.

In **paragraph 2.70** it now says "Current refinements to the SNA sequence of economic accounts concerning environmental issues

build on advances in accounting described in the SEEA." First is the experimental framework meant here as we understood that the central framework is consistent with 2008 SNA (see paragraph 6 of the 2012 SEEA CF)? In other words, it is better to be precise what SEEA is meant. Second as the SNA is refined in 15 years intervals 'current' might not be the best wording.

Paragraph 2.74 reads: *Second, the accounting approaches include accounts in both monetary and non-monetary terms thus supporting the organization of a wider range of information than recorded within the SNA's accounts.* As in the SNA framework we distinguish volumes (and prices) this seems not accurate.

The following sentence in **paragraph 2.75** is unclear: "*For example, accounts for flows of water and energy and accounts for unpaid household service work can be connected to standard production accounts and household sector income accounts.*". What is meant with 'flows of water'? A river? Rain? Transactions and other economic flows of AN.214 assets (water resources)? Also, how can these flows be 'connected' to standard production accounts and household sector income accounts?

In **paragraph 2.83** we read this sentence: *However, the connection between the two systems has allowed the significant advancements in the SEEA since 2010 to provide important inputs to the update of the SNA within the general intent to harmonize concepts, increase the visibility of environmental issues and refine valuation concepts and methods across both statistical frameworks*. We suggest adding "where possible" after "*harmonize concepts*". It should be stated that different accounting frameworks are in place to measure different phenomena, therefore leading to different definitions that should never be harmonised. The only thing that should be assured is that not the same terminology is used for these different phenomena. For example consistently refer to 'economic asset' and 'environmental asset' instead of just 'asset'.

In **paragraph 2.87** we read "*In accounting for flows, ecosystem accounting provides a framework for recording flows of ecosystem services such as biomass provisioning, air filtration, water purification, coastal protection, pollination and recreation related services that collectively contribute to human well-being either as inputs to market goods and services or in providing additional non-market benefits*". Is the SNA definition of market/non-market used? Why are 'goods and services' used in the first and 'benefits' in the second? Is there a CPC link in the first but not in the second?

In **paragraph 2.92,** when mentioning health care expenditure of general government a reference to COFOG division 07 should be made.

- **Jorrit Zwijnenburg_OECD**

2.23: The discussion on economic capital explains that it includes produced and non-produced nonfinancial assets and that this covers "the values of the stock of produced capital and changes in those values including due to investment, depreciation and revaluation". This implies that this is comprehensive, hence, that natural capital does not concern any produced capital. However, we don't think that is correct.

2.59: Reference is made to the ‘distribution’ and ‘redistribution of income’ accounts. This does not seem to be in line with the new official terms.

2.60: Should reference be made to the adjustment for the change in pension entitlements in deriving saving?

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

§ 2.9, (ii): concerning this issue, this is what the present chapter should do and indeed it succeeds in doing it but for the important shortcoming highlighted in question 2; (iv) "clarifying the limits" would be better referred to "monetary aggregates" than to "accounting"; (v) is not appropriate as a research item for the SNA, unless "having regard to all possible approaches to sustainability and well-being": how to use the SNA is a policy issue (e.g. a de-growth approach to sustainability and well-being would use the SNA very differently from how it is used to support economic growth).
§ 2.14: the goods and services "that are outside the scope of the SNA production boundary" are not "consumed". They may be "used" by people, or people can benefit from them, but are by definition not a kind of consumption.
§ 2.15: "from an accounting perspective" "assumptions about how benefits may change in the future" are out of the picture.
§ 2.24, (i): ALL ecosystem services are "non-market", by their very definition. (iii) "both positive and negative" suggests a binary classification of the "changes in condition of ecosystems due to human action". Reality in much more complex than that, there hardly is a universally definitely positive or negative change. Even climate change has advantages for some.
§ 2.36: "there remains an interest in determining monetary values…" presents this interest as impersonal. While widspread, however, the interest in question is not universal. It would be fair to mention the strand of thought (popular e.g. in ecological economics), based in cognitive science and empirical observation of effects of monetisation, according to which such valuation is counterproductive.
§ 2.42: "it is the case… alternative production boundaries… improved measures of changes in well-being". Even if this is a widespread idea, it would be fair not to present it as undisputed.
§ 2.44: "If there is no financial penalty… could go unmeasured in the SNA". Penalties do not measure the effects of well being. These effects are, per se, never measured in the SNA.
§ 2.48, beginning: "potential to use GDP" => "potential to use the SNA"; towards the end: "there are connections between these valuation concepts", please specify "deriving from the welfare economics tradition".
§ 2.55: deducting the depletion of natural resources to derive net measures is an error.

§ 2.66: not only measures in real and per capita terms are important, but also in non-monetary terms.
§ 2.71: the inclusion of the value (wrongly attributed to) of natural renewable energy resources (wind, solar) does not derive from the SEEA! SEEA does not propose such a valuation. Their value, by the way does not measure natural resources, but always the value of something (energy in this case) that is derived from them. see also 2.55 above.
§ 2.72: "There is widespread acknowledgement...". While the significance of monetary measures is presented as universally accepted, the aknowledgement of the relevance of aspects "that are not captured within the ...SNA" is presented as "widespread". We propose to invert the terms, as it is indeed true the opposite.

Figure 2.1: not clear what it means to communicate, in relation to the dimension and placement of the boxes in particular.

§ 2.83: SEEA organises also economic data
§ 2.85: in SEEA CF no "extension" of the SNA measurement boundary is explicitly made. The relation to the SNA's boundaries is surely discussed in the SEEA, but not presented in general as an extension. Only for SUTs this expression is used.
§ 2.87: "Natural capital" is never used in the SEEA to qualify its object of accounting. It is used to refer to a specif approach, which need not be that of the SEEA.

- **Lenka Valenta_Germany FSO**

Figure 2.1 A broader and enhanced combination of accounts – in general, it is very important figure, however, the name of this figure is not fully clear. What does the expression “enhanced” mean? Why do we need it there? Please delete or explain.

Moreover, this figure should be reviewed and corrected. We think that it should describe what is offered within the integrated framework and what else (within a broader framework) could be considered for well-being and sustainability, e.g.:

1. Integrated framework of national accounts:

- Sequence of economic accounts (...)

- Other parts of the integrated framework (SUTs, Labour market tables)

2. Extended & thematic (and supplementary) accounts and tables:

- Household Distributional Accounts

- Education and training

- Unpaid household service work

- Health care

- Tourism, transport, oceans, non-profit institutions

- Human capital

3. Data from the SEEA

- environmental flow accounts, environmental transactions, accounting for ecosystems, …

In addition, the field “Accounting for natural capital (natural resources and ecosystem)” in Figure 2.1, is confusing, as “natural resources” (AN.31) are covered by the sequence of economic accounts. In addition, as the System of Environmental-Economic Accounting (SEEA) - Central Framework is recognized as international macroeconomic standard (see para 1.81), data from this system should be shown in this Figure 2.1 in a separate block.

Finally, provisions of Ch21, in particular Box 21.4 on Taxonomy of the different accounts / tables should be considered.

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4 Do you have any other concerns with this chapter?

10 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Measurement of well-beings

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

In Figure 2.1, it is suggested that the 'accounts that complement the sequence of SCN economic accounts' be grouped into 'social and population statistics' and 'environmental and economic accounting.'

In paragraph 2.25, it would be appropriate to mention the key characteristics of human capital in this section, as has been done with the other capital measures, to maintain consistency in the text.

In paragraph 2.26, it would be very appropriate to mention the key characteristics of social capital in this section, as has been done with the other capital measures, to maintain consistency in the text.

In paragraph 2.28, if there are studies regarding volume and real-term measures, they can be listed in this section as a study recommendation for the reader, or even better, mention which ones and what price and volume measures would be recommended to use.

In paragraph 2.36, it would be appreciated if the series of purposes for which there remains an interest in knowing the value of flows and stocks in the social and environmental spheres is mentioned.

In paragraph 2.46, it is possible to mention that these measurements are related to advances in the generation of indices such as the Global Happiness Report, studies on citizen satisfaction perception, and the estimation of Gross National Happiness (GNH), unless subjective well-being has a different conceptual connotation.

In paragraph 2.55, it is necessary to clarify whether the term 'depreciation' refers to the consumption of fixed capital. If not, what would be the scope and implications of this change in national accounting guidelines?

In paragraph 2.61, this evaluation is mainly viable for final consumption expenditure measures. However, for other aggregates in the sequence of accounts, it will be necessary to find or predefine suitable price indices or deflators.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Hong Dang _Vietnam General Statistics Office**

The chapter should concern about the additional information as follows:

  - add more information about "Education' in paragraph 2.95-2.96
  - add more information about "Human capital" in paragraph 2.97 - 2.98
  - add more information about "Household employment" in paragraph 2.94

to have a more specific view of the relationship between the theoretical framework and the actual situation.

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

Precise definitions of the terms “welfare” or “economic welfare” and “well-being” or “material well-being”, as well as their similarities and differences in the context of the SNA, would be valuable.

- **Amanda Driver_SA_Biodiversity Consultant**

2.24 “The scope of the SEEA covers natural resources, land and ecosystems and includes measurement of *(i) the non-market ecosystem services supplied by ecosystems (e.g. global climate regulation, air filtration and water regulation);* (ii) the pressures exerted on the environment through economic and human activity (e.g. flows of air pollutants, solid waste, wastewater); *(iii) the changes in the condition of ecosystems due to human activity, both positive and negative;* and (iv) responses by economic units in terms of expenditures, taxes, subsidies and other flows recorded but not separately identified in the sequence of economic accounts.”

Suggest slight rewording:

“…includes measurement of (i) ecosystem assets, including their extent and condition, (ii) ecosystem services (market and non-market) provided by ecosystem assets; (iii) pressures… (iv) responses…”

SEEA EA covers all ecosystem services, including those that produce direct monetary benefits.

2.44 In last sentence change “extent and condition of ecosystems” to “extent and condition of ecosystem assets”, for consistency in wording.

2.51 “For example, unpaid household service work and ecosystem services are both excluded from the production boundary of the SNA…”

Should “ecosystem services” be “non-market ecosystem services”?

(Related paragraphs that may be relevant:

1.66 “Similarly, a range of ecosystem services that do not produce any direct monetary benefit are excluded [from the production boundary]”, implying that ecosystem services that do produce direct monetary benefits are included.

2.87 “In accounting for flows, ecosystem accounting provides a framework for recording flows of ecosystem services… either as inputs to market goods and services or in providing additional non-market benefits”)

2.71 Something not right with the wording of the part of the sentence referring to biological resources. Also, does this need to be qualified? E.g. “those biological resources which are already captured in the accounts”?

2.82 Suggest adding “principles” to the list in line 3

2.85 “The SEEA Ecosystem Accounting places direct focus on the measurement of *ecosystems* and the services they supply. It extends the measurement boundary for environmental assets relative to the SNA by including all *ecosystems* within a country and by recording flows of ecosystem services between *ecosystems* and economic units.”

Suggest changing “ecosystems” to “ecosystem assets” in the three times it occurs in this sentence, for consistency with SEEA EA and elsewhere including Chapter 35.

2.87 “In accounting for stocks, ecosystem accounting incorporates *measurement of both the extent (size) and composition of ecosystem types and the condition (or health) of ecosystems*.”

Suggested rewording: “… measurement of the extent and condition of ecosystem assets, organised by ecosystem type” OR “ … measurement of the extent of different ecosystem types and their condition”

An analysis of the composition of different ecosystem types within the EAA can be done based on the extent account, but the account is simply of the extent of each ecosystem type.

- **Lenka Valenta_Germany FSO**

2.6 See out comment to para 1.11 (environmental stocks and flows).

2.24 This paragraph should be redrafted as it may send a wrong message. It should more focus on what the integrated framework of national accounts offers as regards the natural capital (pretty a lot), while there are some overlaps with the SEEA. On the other hand, the SEEA (CF and EA) go much further, offering also material which goes (far) beyond the SNA production and asset boundary.

2.35 This paragraph refers to both thematic and extended accounts, so the extended accounts should be explicitly mentioned here as well.

2.62 To avoid possible confusion as to what "…*a component of the value of natural capital*" means in relation with what is covered by the sequence of economic accounts, it would be better to replace it by "natural resources".

Chapter 3: Overview of the integrated framework

3 Comments

- **Benson Sim**

Paragraph 3.37-why cite CPC 2 when CPC 2.1 is available?

Paragraph 3.39-Should be ISIC 5 rather than ISIC 4.

- **Nourah Aljehani Saudi Arabia General authority for statstics**

has been reflected propperly.

- **Noemi Frisch _Israel ICBS**

In 3.1 "sequence of economic accounts and related tables, which constitute the main elements of its accounting structure" instead of " central framework main accounting structure"
But in 3.2 "integrated framework of national accounts" instead of "central framework"
Perhaps one could say:
"Main integrated framework of national accounts"
3.5 added "or a payment with debit card" - debit cards may be as unusual as coins or notes in future years. Perhaps – electronic payment using f.ex. a card or a phone.
3.11 and 3,12 Why is "central framework" replaced with "sequence of economic accounts"
3.17 should be "although the central bank mainly produces…"
3.20 Would be clearer to write:
"Resident units may engage in transactions with non-resident units (that is units that are residents of other economies). These transactions are the external transactions of the economy, result in changes in stocks/positions of assets and liabilities between resident units and non-resident units, and are grouped in the account of the rest of the world. Strictly speaking …"

3.75 -3.77 Here it seems to be decided that there are:

Sequence of economic accounts <u>included in/part of</u> **Integrated framework**

While in SNA 2008:

Main integrated framework <u>included in/part of</u> **Accounting structure**

Compared to 3.1.and 3.2 confusing. Perhaps it could be:

Main integrated framework <u>included in/part of</u> **Integrated framework`**

Is sequence = integrated framework?

3.126 The heading "An integrated presentation of the sequence of economic accounts" complicates the issue mentioned above. Not necessary to add "sequence of economic"

3.153 here "sequence of economic accounts" – important to be consistent.

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes: UK are satisfied with this chapter.

- **Nicola Massarelli_Eurostat**

Yes.

- **Jorrit Zwijnenburg_OECD**

3.60: “Transactions are valued at the actual price agreed upon by the transactors. Market prices, or exchange values, are thus the basic reference for valuation in the SNA.” This is not in line with Guidance Note AI.1 Valuation principles and methodologies, which “welcomed the distinction between the principles and methodologies for valuing transactions and stocks/positions”. They also preferred the use of the term “exchange value” to “market prices” when valuing transactions. For that reason, we suggest rewording along the lines of “The underlying valuation principle of the SNA consists of exchange values which are the values at which goods, services, labour or assets are in fact exchanged or else could be exchanged for cash. The preferred method for measuring exchange values is by using observed market prices of transactions. In the absence of observable market transactions, …”.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

9 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Para 3.35: “The classification of assets distinguishes, at the first level, financial and non-financial (produced and nonproduced) assets”. The first level classification of assets now includes natural resources. A reference should be included in the brackets: (produced, nonproduced and natural resources).

Para 3.102: “Both accounts show how, for the relevant sectors that undertake final consumption (that is, government, NPISHs and households), …” Add Central Banks in the brackets, in line with para 1.27d, as they also undertake final consumption?

Title *Net and gross measures* (introducing paras 3.142-3.143): Suggest to change the title to “Net Domestic Product”, to put NDP on pair with GDP. The current title gives a lower ranking to NDP.

Para 3.148: should NDP and NNI be added to the list of aggregates per head of population (currently GDP, GNI and HH final consumption)?

- **Jorrit Zwijnenburg_OECD**

3.35: Reference is made to a breakdown of assets into “financial and non-financial (produced and nonproduced) assets (see chapter 11)”. This needs to be updated as for example natural capital is missing.

3.87: The headings in this part of the text are illogical. One would expect the heading to be ‘Current accounts’ not the ‘production account’, which would be a subheading. This is an issue throughout Section D.

3.154: The text seems to imply that these kinds of breakdowns are also part of the integrated framework, whereas the example provided (‘environmental protection’) is more for a thematic account (as indicated in Figure 2.1). To avoid confusion, you may want to delete this text or otherwise specify that this may be captured in thematic or extended accounts.

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>Thematic and extended accounts</u>

Comments: the entire idea of thematic and extended accounts is that they present information that is not in line with the standard accounts. This regards among all the statistical concept used in the standard accounts relative to the analytical concepts introduced in thematic and extended accounts. In the draft version of SNA, the proposed thematic and extended accounts imply expansion of the 2008SNA satellite accounts, for analytical purposes that are more remote from the principles of the standard accounts then in the previous version of SNA.

There is also a difference between thematic and extended accounts/tables that is not expressed in the proposed para. 3.181. The thematic accounts build on the same accounting principles as the standard accounts but expands the scope and/or provides more detailed breakdowns. The information in the extended accounts need in this respect not to be consistent with the main principles of SNA.

We propose the follow wording of para 3.181:

3.181 Those special constructs, which are consistent with but not fully integrated with the standard framework of national accounts, are called thematic accounts/tables. When analytical information based on concepts that differ from SNA the information on how this information relates to the SNA is presented in the extended accounts/tables. For reasons of coherence the presentation in the thematic and extended accounts follow the same accounting structure as in the SNA standard accounts.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

10 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Karen Kuhn_South Africa RB**

Inconsistencies relating to the use of the phrase “Accumulation of assets accounts” and “Accumulation accounts”

According to terminology in chapter 21 should it not be Accumulation of economic asset accounts and not Accumulation accounts?

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **Floris Jansen _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS:

General comment: due to missing tables in this chapter, it is hard to understand some parts as well as see the implications of changing terminology (i.e. changing ‘resources’ to ‘revenues’ and ‘uses’ to ‘expenditures’).

Paragraph 3.6 explains the concept of debit/credit and party/counterparty (i.e a quadruple accounting system) without calling it so. It feels like a missed opportunity to explain this concept.

Paragraph 3.13: While of course a non-financial transaction should occur in tandem with a financial transaction (exception e.g. in case of some imputations and transactions in kind), the wording in the second part of the sentence seems unclear and possibly imprecise. Maybe “the specific nature of the settlement in terms of financial instrument is not measured in aggregate compilations, as the financing of different non-financial transaction is fungible in nature”?

Paragraph 3.16 explains “*The fundamental units identified in the SNA are the economic units that can engage in the full range of transactions and are capable of owning assets and also typically capable of incurring liabilities on their own behalf. These units are called institutional units. Further, because they have legal responsibility for their actions,* *institutional units are centres of decision-making for all aspects of economic behaviour. In practice, some institutional units are controlled by others and thus in such cases autonomy of decision is not total and may vary over time. Legally independent holding of assets and liabilities and autonomous behaviour do not always coincide. In the SNA, preference is generally given to the first aspect because it provides a better way to organize the collection and presentation of statistics even if its usefulness is limited in some cases."* Why was "*also typically capable of"* introduced? It seems not needed and it would be better not to change the existing text. Second, it is regrettable that the legal status is still considered less relevant than the economic reality and that the gap to ESA 2010 was not closed in this respect.

Paragraph 3.17: it should better read: "it also typically includes the central bank". Presumably, the central bank can only be recorded separately from general government in case an institutional unit can be identified.

Paragraph 3.24 explains "*Finally, some observable monetary transactions are not recorded as they are observed in practice because they are of a composite nature (nominal interest on loans and deposits provided by financial intermediaries, total insurance premiums) or their legal nature does not correspond to their economic one (financial leasing). Consequently, for the SNA, they are split up into various components and their classification and routing are modified*." This is not entirely correct as (of course) the monetary flows are recorded as transactions in F.2. Note that F.2 is never rerouted either. Rather than not being recorded, the transactions are partitioned. In the case of FISIM, the D.41 and P.2 transactions are partitioned, but not the F.4 transaction. This should be clarified. It would be for example better to revert the following change, which introduces an error: "*on loans and deposits provided by financial intermediaries",* while the deletion of *"nominal"* is good. (As in other places, the newly introduced terminology ("interest and other similar income") is not followed, leading to difficulties and confusion.

In **paragraph 3.31** the distinction between new and existing fixed assets is a bit semantically strange as new assets also 'exist'. Why not use the SNA update to change into 'new' and 'second-hand' or 'newly produced' and 'previously produced' to identify whether it is part of current P.1 or pervious P.1 (throughout the SNA).

Paragraph 3.39: why not reference updated ISIC and CPC? Is the yellow marking an indication that an update will be assured?

In **paragraph 3.44** is rewritten by changing 'resources' to 'revenues' and 'uses' to 'expenditures' by conveniently using wages and salaries as example. But what about typical national account concepts of production (P.1) and consumption (P.3/P.4)? It was, at least for didactical reasons, very useful to distinct resources from revenues and uses from expenditure for this reason (see also the GFS presentation). This should be explained (also in **paragraphs 3.88-3.90** for P.1 and **3.102-3.105** for P.3/P.4), but preferably the decision to rename resources and uses is reversed. For European GFS it poses large difficulties as currently "total revenue" and "total expenditure" are being used.

Paragraph 3.61: The last sentence gives the impression that market values as observed in market transactions should be disregarded for the valuation of non-financial assets. This is going even beyond the innovations included in the list of consolidated recommendations and should be rephrased.

Paragraph 3.96 and the title above: It would be good to harmonise the renaming of the secondary distribution of income account. When such long names are being used, maybe italics or single quotation marks might help the reader follow the text. In chapter 21, 'transfer income account' seems used (in **table 21.8a and b, but not in table 21.9**). It may be better to be more conservative on the changes in terminology if the result is that there are 3 names for 1 account.

In **paragraph 3.105** we read: "*The central bank also has collective consumption, but typically does not transfer individual goods and services at prices which are not economically significant to households.*" This is a rather large change to SNA with a lot of implications to the system. Why not consider that the non-market output produced by S.121 is consumed by S.13 as a convention? This would imply a smaller change to the framework, than recording a current transfer by banks rather than a tax. These payments are compulsory and unrequited and the rationale for this change and why it should be an improvement is not clear. If P.32 of S.13 a COFOG function need to be attributed. If P.32 of S.12, is there a suggestion for a new functional classification of S.12 expenditure for only one type?

Paragraph 3.111: it is a pity that capital transfers expenditure should still be shown with a negative sign on the "wrong side".

Paragraph 3.143 does not mention the impact of "depreciation" and "depletion" on the gross value added of non-market producers and thus gives the impression that the gross value added measures are not impacted by the changes in the 2008 SNA, including their reliability and comparability between countries. Why is "degradation" mentioned? Is it different from depletion? Also, why is it assumed that estimates of depletion already exist?

In **paragraph 3.163** we read: "*In relevant cases, information is also provided on the links with other macro-economic standards, such as the Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG) 2016 in the chapter on financial corporations, and the Government Finance Statistics Manual (GFSM) 2014 in the chapter on general government and the public sector* (…)". In general, the reference to specific versions of the manuals should be avoided as they are all undergoing update and this avoids referencing versions that are outdated almost from the start of the SNA life cycle. See also comment on **paragraph 1.81.**

Paragraph 3.176 reads: "*From whom-to-whom-tables are also useful for current transactions, such as property income and current*

transfers, as well as capital transfers. In the case of various property income items, a link may be established with related assets and liabilities in the balance sheets on a from-whom-to-whom basis." This is a very informative piece of text as it points to the relationship between property income paid by the debtor to the creditor and the underlying asset. What seems to be missing is, as we think to understand, the SNA wants to adopt the transactor approach (i.e. a transaction between the old creditor and the new creditor instead of recording a transaction vis-à-vis the debtor) for transactions in financial instruments. The link can only usefully be established in the debtor-creditor approach.

Paragraph 3.184 mainly covers supply use frameworks, there are lots of monetary satellite accounts (e.g. health, education, social protection, tourism, etc.), at least in Europe, which are more or less consistent with national accounts. Why is SEEA singled out here?

- **Jorrit Zwijnenburg_OECD**

3.143: Reference is made to ‘degradation’ where we think that ‘depreciation’ was intended.

- **Lenka Valenta_Germany FSO**

3.77 This paragraph should contain an exhaustive list of all accounts and tables included in “the other parts of the integrated framework”, otherwise it remains undefined and unclear.

In this respect, it is not obvious from the text where “accounts in volume terms ” (Ch 16) belong. In Ch1, accounts in volume terms are presented under “the other parts of the integrated framework” (see para 1.35), while in this chapter they are presented under D.3 Integrated presentation of the sequence of economic accounts (para 3.147).

3.149 - 3.152 Heading: B.4 The other parts of the integrated framework – these paras address: SUTs, Labour markets tables and functional analysis. Either it should be mentioned here that these are only examples and the complete list of relevant accounts and tables can be found e.g. in para 3.77, which then would need to defines all parts of “other parts of the integrated framework” (see our comment above to this para), or all tables and accounts within “the other parts of the integrated framework” should be included here, i.e. also capital services and From-whom-to-whom (FWTW) tables, while one can mention that the FWTW tables are then further elaborated in paras 3.171-3.177.

---

4 Do you have any other concerns with this chapter?

8 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Some elaborations with examples on institutional units and relation with registration of units

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

"Yes. It would be useful to include a table or figure related to Labour market tables, in line with the tables and figures presented in the chapter.

In paragraph 3.32, changes in inventories refer to the difference between stock inflows and outflows and recurring losses. It is not very clear how ""recurring losses"" should be treated, so it would be important to clarify, if possible, with an example, to characterize recurring losses and how they would adjust the change in inventories.

In paragraph 3.37, to study in detail the transactions of goods and services, the SNA uses the Central Product Classification Version 2 (CPC). It is important to note that there is an official update Version 2.1 CPC year 2015. Likewise, the draft structure of revision 5 of the ISIC of February 2023 is available. It would be important to include these versions to be consistent with the update of the SNA-2025 document.

Paragraph 3.37 Reference is made to CPC 2 (2008), but the latest version is 2.1 (2015).

Par. 3.77 Among the other aspects of the Integrated Accounting Framework, environmental and sociodemographic topics are not mentioned. However, in previous chapters, the need to articulate and correlate economic measurements with environmental and sociodemographic ones is recognized.

The title after paragraph 3.82 is "The three sections of the sequence of accounts", it could be "The three sections of the sequence of economic accounts"

The title in paragraphs 3.83, 3.129, figure 3.1 and 3.2, refer to accounts. It is suggested that it be economic accounts.

Par 3.82 If there is any recommended format, it is suggested to mention which ones and provide some examples of appropriate tables.

Par 3.111 In the second line, it does not specify which net transaction is being referred to.

Section D part 3. Tables, annexes, figures, and charts are necessary to ensure the correct interpretation of the texts.

Par 3.143 A bit more context is required regarding the global treatment of the recommended depletion measurements and their methodological framework.

Par 3.148. It is suggested to include numerical examples for calculating the number of households and individuals when subdividing the household sector.

Section G. In general, more context is needed in relation to the integration of environmental and sociodemographic topics into the central framework. Primarily, a deeper exploration of issues related to estimates, measures, or indicators of well-being, inclusion, and sustainability is desirable.

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Jorrit Zwijnenburg_OECD**

3.51-3.54: It may be good to include an explicit reference to Chapter 4 where quadruple entry accounting is discussed in much more detail.

3.59-3.62: It may be good to include an explicit reference to Chapter 4 where valuation is discussed in much more detail.

3.143: Reference is made to the use of NDP "to provide a significant tool for various types of analysis", but it would be good to also emphasize the importance of NDP as a superior indicator to GDP (aligning the text with the statement in paragraph 1.39).

3.147: Reference could also be made to compiling balance sheets in real terms.

3.158: Reference is made to a supplementary table in Chapter 24, but it is not really explained what this table relates to specifically. I assume it is the table on social insurance pensions, but in that case, it would be good to specify that here.

- **Lenka Valenta_Germany FSO**

General comment - very ambitious to introduce many different concepts at the same time. It may lead to less international comparability and flaw data coming from the sequence of economic accounts.

Comment on terminology – this chapter describes "sequence of economic accounts", but in other chapter one can find the expression "standard sequence of economic accounts" (7.32, 22.121, 22.128, 35.29, 38.6, 38.43). Preferably one term should be used (we assume there is no difference between those terms).

3.1 Not exactly clear what newly included wording "… *of these standards*" means in the context of the SNA (also in 3.155, 3.162). (Why) do we need it? Please explain or delete.

3.75 The paragraph should read: "The accounts **integrated framework** can be divided into two main classes:

- The sequence of economic accounts; and
- The other parts of the integrated framework”

Remark to Households distributional accounts (accounts for the distribution of household income, consumption and wealth) – these accounts are not mentioned in in this chapter at all. Due to their prominent role, one wonders where they belong (under heading “Introducing thematic and extended accounts and tables”, i.e. outside the integrated framework?). Please clarify.

Chapter 4: Flows, stocks and accounting rules

3 Comments

- **Eli Fenichel_US Yale Univ**

4.7 – worth defining mutually agreed. Is taxation mutually agreed?

4.15 -- Worth noting that there is valuing in connecting these measures to quantities too.

4.34 -- Seems to me expenditures on things like environmental protection may also be reroutings.

4.70 -- externalities can also be positive and provide a benefit. For example, if my neighbor builds a deer fence, that might keep the deer from eating my yard too.

4.71 – "considerable technical difficulties" This is an overstatement. The challenge is being clear what is being discussed. Often such externalities may actually be reroutings. For example, if there were a single factory in town, a firm might pollute, the air quality decline would lower worker productivity, and the firm would pay that cost. But, if the one firm is damaging worker productivity for many firms it is a rerouting.

4.72 – there can still be a small risk, such that the expected private benefits exceed the expected private costs, but there is still a small risk.

4.72 – The example, exactly, but when these approaches are applied, there is an attempt to internalize costs, and the SNA must not create a narrative that environmental taxes reduce GDP. In such cases an honest effort to measure the rerouted benefits is essential in order determine the net value add.

4.75 -- It is important to address illegal activities like illegal fishing and timber theft. This can create products that flow into "legal markets." Also, how is expenditure on law enforcement treated. That should be mentioned here. Are legal services transfers? These may be minor issues for general macroeconomic accounting, but failure to address them clearly erodes faith in the system. Moreover, these do matter substantially for some countries.

4.86 – revaluations -- I believe the refers to pure price effects. Holding gains may occur because of scarcity changes in the product or substitute product market. This needs to be addressed differently. A possibility for holding gains, in the case of renewable natural resources, is physical growth. This needs to be mentioned somewhere. Though, I suppose it could be treated as negative depreciation.

4.111 – there is a substantial and important error in the phrase “benefits embodied by the asset” - This is only true, under the thought experiment that the society could liquidate the asset without effecting the price of the asset or prices in other markets. This needs to be made clear by editing the sentence, “This value represents the market's view of the total revenue received if the asset could be liquidated at current market prices, without having prices effects on the asset itself or in other markets.” The problem is that for many countries at the aggregate level liquidating any asset would cause price effects in numerous markets.

4.115 -- It may be worth pointing out that these could easily classified as produced or non-produced assets. The challenge for natural assets is that they may be a mix of both. The risk with this system is that natural resources will be omitted all together.

4.116 -- if a production forest is transferred to a water utility, who stops harvesting, but uses the forest to reduced treatment expenses, then the forest is still used in production. This should be made clear.

4.116 – my recollection is electromagnetic spectrum and a few other things were are also in this group.

4.119 – The problem here is that most natural resources are owned, even when governments own on behalf of residents. This is really should be removed. The case when natural resources are not owned is maybe -- maybe high seas fisheries. In that case, there are international agreements. Even deep-sea minerals are owned by governments through the sea bed mining authority and treaty agreements.

4.122 -- This needs further development or should be cut. If the asset could be used in the future, then it should be in. If it is contributing to production in situ, then it should be in.

4.140 -- PLEASE make clear the difference between an exchange value (a rectangular area) and an exchange price, the value at which the marginal unit is exchanged. The price concept is the same as the utility price concept up to the accounting boundary. The difference is how inframarginal units are treated. The use of the term exchange value for price in some places of the SNA a rectangular area bounded by price and quantity in others has causes confusion and endless discussion. This MUST be fixed in the 2025 SNA. Here the term exchange value is used when exchange price is meant.

4.144 -- This is incorrect. The exchange value is the price times quantity. That is different than the market price. This confusion in the 2008 SNA has led to many many problems.

4.144 -- price discrimination is real, and should be included in the SNA. It is simply tracing out the demand curve. Treating price discrimination as error as important implication for measurement of money supply and budget forecasting. Generally, this is naive to how market price formation works. Say a store sells shirts on Monday the shirt sells for $10, and the store sells 80% of its inventory. On Tuesday, the store markets the shirt down to $7 and sells the rest. The three dollars is not an adjustment it reflects the actual demand curve. That is some units are sold a marginal price of $10 while others at $7. The SNA should reflect this.

4.146 -- Should be clear that methods such as regression or matching are appropriate for imputing prices with multiple attributes. This is exactly what hedonic price functions do.

4.155 – “The suggested rule of thumb is to use the value assigned by the donor as a basis for recording.” This is contrary to most economic thinking. It matters if the donor's value is less then or greater than the receivers.

If the receiver’s value is used, then the surplus is spent on other goods -- so it acts as real income. This is what Hick's intended.

4.161 -- Concessional loans often have requirements for certain kinds of in-kind quid pro quo. For example, concessional loans linked to forest conservation imply a valuation on leaving the forest standing. This implies additional value to the forest in this case, which should be recorded correctly.

4.165 -- ...capital services, including NET depreciation...

4.165 -- the price should be the marginal increment of the net present value of capital services. The PMI method is often bad at this.

4.167 – well done.

4.317 – price can be very important in some cases. This is especially true for natural resources.

- **Nourah Aljehani Saudi Arabia General authority for statstics**

the covering of non-money transactions needs more details

- **Marshall Reinsdorf_ISWGNA Editorial Team**

First sentence of 4.269 is hard to read, Changing "and the same financial instrument" to "and have the same financial instrument would help.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Karen Kuhn_South Africa RB**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

It is unclear how much of the UK's previous feedback has been taken on or actioned, so we highlight below some of our main concerns, but would encourage a review of the previous UK response.

4.121 makes an important step of resolving some of the language issues we identified, where, for example human capital was referred to both as *excluded* (implicitly from the sequence of economic accounts) and *included* (implicitly within the wider scope of the SNA). It is worth checking this has been consistently applied.

The UK has made recommendations on where a reassessment of tone and content may be beneficial to make the chapter clearer. Please see comments on 4.299 which have not been updated based on our previous feedback.

4.299 – For the final bullet in that para. The UK does not accept the legitimacy of this proposed revision. This is a substantive change from SNA08 on which no explicit consultation occurred, and which has not benefited from a guidance note or any due process. The permissive wording from SNA08 should therefore be maintained permitting the direct measurement of government output and the quality adjustment of output to deliver an equivalent to value. For example, the wording should change to be: "*Finally, in the case of non-market output of government and NPISHs, output and final consumption should be valued by using direct measures of output, preferably* *including relevant adjustments to take account of quality change to align to the concept of value added. The sum-of-costs method can be used where output measures cannot be sourced."*

4.108 – The sentence on gold needs refining. The UK suggests the following edit *"Gold bullion held by monetary authorities, and which meets the purity / quality requirements to be recognised as a reserve asset is treated as a financial asset even though the holders have no claim over other designated units."*

4.293 – Countries may not use sum of costs approaches, particularly for their annual national accounts – they use direct output estimates. This paragraph should be corrected to reflect that.

- **Nicola Massarelli_Eurostat**

Yes

- **Jorrit Zwijnenburg_OECD**

4.144: "Transactions are valued at the actual price agreed upon by the transactors. Market prices, or exchange values, are thus the basic reference for valuation in the SNA." This is not in line with Guidance Note AI.1 Valuation principles and methodologies, which "welcomed the distinction between the principles and methodologies for valuing transactions and stocks/positions". They also preferred the use of the term "exchange value" to "market prices" when valuing transactions. For that reason, we suggest rewording along the lines of "The underlying valuation principle of the SNA consists of exchange values which are the values at which goods, services, labour or assets are in fact exchanged or else could be exchanged for cash. The preferred method for measuring exchange values is by using observed market prices of transactions. In the absence of observable market transactions, …". We suggest rewording along the lines of "The observed market transactions in most cases will represent exchange values as described in the preceding paragraph."

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

9 Comments

- **Mark de Haan Netherlands**

Paragraph 4.47: It is unclear to what extend this applies to financial transactions. Should the financial transactions of a clearing center for example be removed from the accounts as this is just "arranging for a transaction to be carried out"?

- **Karen Kuhn_South Africa RB**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Para 4.110: consider redrafting the last sentence by replacing “have been grouped together“ with “are classified differently”.

Para 4.182 on Valuation of rerouted transactions: We understand that this paragraph is taken from BPM6. It recommends that RIE are distributed in proportion to the direct investor’s ownership, based on “shares in net saving”. ESA 2010, instead, does it in “proportion to their ownership of the equity”. We believe that the ESA rule is clearer and easier to administer as the proportion of ownership is a specific requirement of FDI statistics, so should be readily available, while net saving of the foreign DIE may not be available as the compiling institution may not have information on the value added, operating surplus etc. needed to calculate the saving of a non-resident enterprise. Values of rerouted transactions will have to be derived from values of other observed transactions to which they are related. For example, values of transactions in reinvested earnings are derived from the direct investors’ shares in the net saving of the (foreign) direct investment enterprise before reinvested earnings are distributed. We would recommend to adopt the ESA rule.

- **Jorrit Zwijnenburg_OECD**

4.117: It would be good to explain that crypto can also be appearing without the involvement of miners.

4.176: Reference is made to foreign currency, but the issue of transactions in cryptocurrencies is also becoming more relevant. Perhaps some reference to the need to also convert these transactions into national currency may be useful. Furthermore, cryptocurrencies are not mentioned in this section at all. Not sure if this would be needed, but it may be considered.

4.317: The line "equals gross operating surplus" should also include 'gross mixed income' which may be relevant in case of renewable energy resources due to significant household production of electricity. It would also be helpful to explain here that these future benefits are measured by the resource rent.

4.319: In referring to the split asset approach, it may be better to describe the extractor as generator of resource rents, with the government as appropriating part of it; an alternative would be to talk about extractor and government each capturing part of the resource rent. This is an issue that should be applied consistently throughout the handbook.

- **Lenka Valenta_Germany FSO**

4.99 This para introduces a concept of the split asset approach for "natural resources" and does not mention any exclusions of natural asset categories from this approach. Within the rights to use a natural resource, the split asset is to be used "*when the legal owner allows the resource to be used for an extended period of time in such a way that in effect the user controls the use of the resource during this time with little if any intervention from the legal owner*" (para 27.16). Please explain if the split asset approach is applicable to all natural resources or whether there are any exclusions. For example, if this arrangement above between legal owner and user applies to land, should land be split? Please clarify.

4.115 The balance sheets are part of the integrated framework, which covers from natural capital only natural resources AN.31(= those fulfilling the criteria of economic assets). Ecosystem assets (AN.32), which are the second part of natural capital, are outside the SNA assets boundary and this should be made clear here.

In general, all assets, which are outside the SNA assets boundary should be excluded from the SNA asset classification system (i.e. AN.32 Ecosystem assets, AN.4 Human capital and AN.5 Social capital). Their inclusion only blurs the standard asset classification as well as the notion of integrated framework, as these assets are not within the integrated framework as described in chapter 3 (and paragraphs 4.119-4.122 on exclusion from the assets boundary).

4.292 Please explain in which cases depletion should be included in sum of costs valuation. It is not clear whether or how it applies to valuation of non-market production and to valuation of output for own final use (own account production of fixed assets by market and non-market producers).

4.292-4.298 Valuation at sum of costs – we continue to oppose the inclusion of the return to capital in valuation of non-market productions (as well as in own account production of fixed assets by non-market producers). This substantial change to SNA has not been sufficiently elaborated (pros and cons), there is no implementation guidance available and no early implementation has been presented, which would clarify the data sources and methods to be used (also for quarterly accounts), including impacts on macroeconomic aggregates (GDP, consumption (including classifying government consumption by the COFOG, etc.).

Moreover, and as mentioned by us already in general comments to the whole SNA, in the estimations of return to capital, an interest rate needs to be selected (which is already very subjective) and the GDP will rise or decrease when interest rates for government debt will change. In addition, non-market producers will persistently show positive operating surplus, although no actual profit was generated.

4.317 Resource rent (residual value method) – it is necessary to clarify what "return to capital used in production" represents. There are 2 components: return to produced assets and return to non-produced non-financial assets (excluding natural capital), see also the SEEA-CF Table 5.5. In addition, it should be also explained, if return to produced assets (probably excluding valuables on conceptual grounds) or rather return to fixed assets should be used.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

11 Comments

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Eli Fenichel_US Yale Univ**

Please, please go through and make sure exchange value is used when it is price x quantity and exchange price is used when it is price at which a good or service is exchanged. The two are not the same thing.

- **Sarah La Rosa Belgium National Bank of Belgium**

In the SNA chapter on transfer pricing, the emphasis is placed on adjusting transfer prices to market values. The basis for calculating these transfer prices in the business world seems to be the ‘at arm’s length principle’, as required by the OECD BEPS manuals. This means that transfer prices between related companies appear to be based on the ‘at arm’s length principle’, which is also the basic rule for determining the transaction value, as stated in the SNA in paragraph 4.142. (para 4.142 Market prices for transactions are defined as amounts of money that willing buyers pay to acquire something from willing sellers; the exchanges are made between independent parties and on the basis of commercial considerations only, sometimes called “at arm’s length.”). The adjustment of these transfer prices to market values, as stated in the SNA, therefore seems contradictory as the transaction value in the SNA and the transfer prices appear to have the same basis of valuation (‘at arm’s length principle) and therefore these transfer prices already seem to be valued at market value. We would have liked to have had more clarification/guidance on what the SNA aims and/or if it is effectively appropriate to adjust these transfer prices in the light of recent OECD BEPS manuals/legislation (master files, local files, ...) and the follow-up of the compliance with the OECD BEPS rules by the authorities in many countries.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

Some of the terms used are not consistent with the terminology found in chapter 21. We suggest to review all chapters to ensure that the changes to specific terms have been incorporated, for instance, "finance lease" instead of "financial lease".

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Para 4.295: “Regarding the extent of capital services, **i.e. depreciation, depletion** and return to capital, all non-financial assets used in the production of the relevant goods and services should be included, thus not only fixed assets but also **inventories** and non-produced non-financial assets.” Do inventories deplete or depreciate? Which capital services do they provide? Is this consistent with 17.3 which do not mention them as providers of capital services? See also 11.95 for military weapons inventories not providing capital services.

- **Floris Jansen _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS:

General comment: We note that the discussion of stocks is moved to after the discussion of flow (from 2008 SNA chapter 3 part B 2025 SNA chapter 3 part C). What is the reason for this shift? From a didactical point of view it could be argued that flows should be explained as the difference between opening and closing stock thereby making it logical to first explain stocks as in 2008 SNA. In some places it seems that this choice needed to be reflected in the text but it did not lead to a change (e.g. see paragraph 4.88 of 2025 SNA / 3.18 of 2008 SNA).

In becomes clear that the term ‘resources’ is replaced by ‘revenues’ and ‘use’ is replaced by ‘expenditures’. This seems to create a problem for some transaction that were typically not recorded as revenue or expenditure (for example P.132 of general government).

In **paragraph 4.21** “*typically*” is added before “*able to incur liabilities*”, which is a weakening of the definition of institutional units. It is not clear now what units, that are not able to incur liabilities, are nonetheless being considered institutional units instead of being part of the controlling unit. It is not clear on which basis this change is included.

We strongly disagree with **paragraph 4.24** that promotes the transactor approach.

4.35 This paragraph omits social contributions other than those in the context of social security, i.e. other social insurance schemes, for which the same treatment applies. I.,e. "social security contributions" should be rephrased to "social contributions" and "social security funds" should be rephrased to "social security funds and other social insurance schemes" or simply "social insurance schemes".

The treatment of social insurance scheme services charges (D.61sc) and households' social contribution supplements (D.614) might be elaborated here, too.

In general, the paragraph seems not updated from SNA 93 and update and completion seems needed.

4.36 “Similarly, the transfer elements of lotteries and other gambling are transactions through the gambling operator, but they are rerouted to occur directly between those participating in the lottery or gambling, that is, between households and possibly to charities (See paragraph9.xxx(SNA)/ paragraph 9.xxx (BPM.). [Editors: This is based on paragraph 3.16, BPM6]"

The new paragraph is misleading at best. ESA 2010 4.135 is very clear and might simply be copied.

The problems in this paragraph are the following:

a/ It is not clearly explained that there is a service charge typically payable to the lottery organiser, i.e. the amounts received from ticket sales net of the winnings paid out .

b/ "and possibly to charities" seems incorrect. if the service charge is distributed to charities, isn't this a current transfer between NPISH or from government to NPISH? (with further possible rearrangement needed).

c/ "other gambling" should be complemented by "activities".

d/ "rerouted" seems incorrect. "rearranged" should be used.

4.47 We note that “*Units facilitating a transaction on behalf of other parties”* is renamed into “*Reassigning transactions*” which is in line with the terminology of 2014 GFSM (paragraph 3.30). However, it seems not to bring any more clarity. Why not call it “*Recognising the principal party to a transaction*” in line with ESA 2010?

4.48 “A second example is the collection of taxes by one government unit on behalf of another. The SNA /BPM follows the guidance of the Government Finance Statistics Manual (International Monetary Fund (IMF), 2001 2014), known as GFSM 2014 2001 as follows. In general, a tax is attributed to the government unit that (...)"

No reference to GFSM is needed here, the principles are adequately stated without without needing any references to GFSM. It should be eliminated and the SNA should not refer to other handbooks for rules that are not subject to the same consultation procedure as the SNA.

Moreover, generally, references to specific versions of other international manuals should be avoided, in particular, as the GFSM 2014 is currently being updated. This avoids being outdated being outdated from the start.

4.49 (old paragraph 3.71) "*Any amount retained by the collecting government as a collection charge should be treated as a payment for a service. Any other amount retained by the collecting government, such as under a tax-sharing arrangement, should be treated as a current grant. If the collecting government was delegated the authority to set and vary the rate, then the amount collected should be treated as tax revenue of this government.*" This should be reviewed. The amounts retained do not meet the definition of a sale and instead have the nature of other current transfer (D.73). There is no "market" among tax collecting government agencies and rather an agreement that amounts will be retained. It is at odds with GN SW.14 on not treating this kind of administrative "fees" as P.11 or P.131 and at odds with agreed guidance in the European context. (https://ec.europa.eu/eurostat/documents/1015035/2041357/GFS_interpretation_Borderline_between_transfers_and_purchases_of_goods_services_between_S13_units_2024_02_09.pdf/3eddb0f0-2e64-f85c-d626-67391d73ba6c?t=1707812144753)

In **paragraph 4.71** (also in the 2008 SNA paragraph 3.93) it is written: "*Further, there would be considerable technical difficulties involved in trying to associate economically meaningful values with externalities when they are intrinsically non-market phenomena. As externalities are not market transactions into which institutional units enter of their own accord, there is no mechanism to ensure that the positive or negative values attached to externalities by the various parties involved would be mutually consistent. Moreover, accounts including values for externalities could not be interpreted as representing equilibrium, or economically sustainable, situations. If such values were to be replaced by actual payments the economic behaviour of the units involved would change, perhaps considerably*". It seems that 'non-market' / 'not market' is not meant in the SNA way to discuss production (P.13) or producers (S.13/S.15). Furthermore, it seems better to discuss externalities under other flows instead of under transactions and separate from illegal transactions as these do constitute transactions. Lastly, the sentence “*externalities could not be interpreted as representing equilibrium*” is hard to understand because there are ways to internalise the externality (e.g. CO2 permits).

In **paragraph 4.88** (2008 SNA paragraph 3.18) the last sentence “*Once the definitions are clear, the way in which assets and liabilities are classified within a balance sheet are touched on as well as the way in which items enter and leave the balance sheet*”, seems strange now that the discussion of stocks moved to after the discussion of flow (i.e. “*the way in which items enter and leave the balance sheet*”) (from 2008 SNA chapter 3 part B 2025 SNA chapter 3 part C).

In **paragraph 4.89** the sentence “*These goods and services are used for the three economic activities recognized in the SNA, production, consumption and accumulation*” uses economic activities in a non-ISIC way (a problem more widespread in the SNA).

Paragraph 4.92 now reads**: “***Sometimes government may claim legal ownership of an entity item on behalf of the community at large. No entity item that does not have a legal owner that can claim the associated benefits, either on an individual or collective basis, is recognized in the SNA macroeconomic statistics.*” The change from ‘entity’ to ‘item’ (meaning asset as we understand from paragraph 4.101), seems not correct here. This sentence could for example be interpreted that illegal ‘items’ such as drugs or weapons are not recognised. Also, as the SNA is an economic framework not a legal framework, it should not take the legal status as a basis for recognising anything (including institutional units). There are many institutional units without legal status (e.g. illegal immigrants and illegal businesses) recognised in SNA/macroeconomic statistics. Therefore it is better to delete this whole paragraph.

New **paragraph 4.99** on natural resources advocates a split asset approach: “*Especially in relation to natural resources, a government is typically the legal owner and grants rights or permissions to exploit the resources to another institutional unit. In such cases, the benefits may be shared between the government and the exploiter of the resources, and the economic ownership of the resources is split between the two entities involved, in line with the shares each entity appropriates*.” Here ‘*the shares each entity appropriates*’ is not clear as appropriation is also used in SNA in a very different way (in the nationalisation sense, see 2008 SNA paragraph 22.142), while shares is not meant as AF.5. We believe it is to be understood as the relative share using the NPV of resource rent. It should be explained why this splitting of assets between more than one economic owner, which is normally not done, is advocated here instead of other more conventional, solutions (such as the recognition of an additional asset in the form of a contracts, leases and licences).

In **paragraph 4.110**, the sentence "*Assets that are not financial assets are non-financial assets*" seems redundant. Furthermore, shouldn't this paragraph come after the header "the asset boundary"?

In **paragraph 4.114**, '(legal)' is added before 'contract', while 'constructive' is removed, thereby making legalistic considerations more important than the economic substance, which is degrading the economic framework. That is dangerous as a lot of transactions (including with delayed payments) occur without a legal contract, not only illegal transactions. When such liabilities are not recognised, are the transactions that is being financed (e.g. the purchase of illegal drugs, borrowing between households, drinking on the tab etc) also not recognised in order not to create discrepancies?

In sub-section 6 four types of assets are mentioned while only 3 are discussed (natural capital is missing).

In **paragraph 4.143** (2008 SNA paragraph 3.120): "*When a price is agreed by both parties in advance of a transaction taking place, this agreed, or contractual, price is the market price for that transaction regardless of the prices that prevail when the transaction takes place"* it might be worthwhile to discuss the case of an option contract as this results in the opposite recording of what is written here. In an option contract the price is fixed in advance of the transfer of the underlining asset but the difference between the fixed price and the market price is incorporated in the financial instrument (AF.71) not the underlying asset. Besides, taking this price at the moment of contract seems a bit strange when the transaction recorded at the moment of acquisition (change of economic ownership). If prices deviate between signing of contract and acquisition it should constitute an other economic flow (K.7) for the economic owner that will never materialise as the price is already set. Or is proposed not to revalue after the contract is signed ? This problem seems recognised later in **paragraph 4.235** without providing a solution. Furthermore, it could be noted that a price in a contract that is signed by non-market producer(s) might incorporate a gift element. Such gift element should not be recorded as a lower price of the purchased asset (exchange transaction), but rather as transfer. Above points seem also relevant for **paragraph 4.154**.

In **paragraph 4.160** it is written "*(...) Here, one can also add that the actually observed exchange values, which may be motivated by global tax avoidance or other reasons, also represent an economic reality of its own, albeit not one which is based on market prices and other commercial considerations.*" It is not clear what is being proposed here. It is not clear what is recommended area with very large impact on some countries' economic accounts.

In **paragraph 4.166** it is written: "(...) *However, most non-financial assets used in production are not generic, but specifically designed and constructed for a certain production activity. Moreover, the markets for these second-hand assets may be extremely thin. As a consequence, the observable market prices for these second-hand assets may be close to their scrap value, thus not providing a good representation of the capital services that can be derived from them in the remainder of the service life, the latter representing the value of the asset in an enterprise as a going concern. One could also argue that the second-hand assets in these types of markets are not the same as the assets used in production, thus not being a good representation of the assets being valued*". Isn't it rather the case that the price of such second-hand equipment is low because of all kind of associated (transfer) costs (e.g. dismantling in factory A, transportation, installation in factory B) and risks that are normally covered via insurance in the price of buying new assets? Furthermore, also in very thick second-hand markets, e.g. for cars, it is a normal that prices fall steeply the moment you drive your new car out of the garage.

In **paragraph 4.167** it is written *Similar valuation issues may exist in the case of, for example, natural resources, the stocks of which are generally not traded in the market, so any values derived from occasionally traded stocks cannot be used for the valuation of similar assets because of the heterogeneity of the resources in question. In these cases, the value on the balance sheet can be approximated by the net present value of future benefits derived from these resources, using the residual value method, i.e., the output generated with the exploitation of the resources minus all costs associated with the exploitation. Exploitation rights are often provided by government for a series of rent* *payments. The (present value of) actual rent payments may not account for the full value of resource rents that can be derived from these assets, and the asset in question may clearly generate a future stream of resource rents, going well beyond the payments of rent to the (legal) owner. The unit having the rights to exploit the resources thus appropriates part of the resource rents, reflecting the future capital services derived from these assets by the unit having the exploitation rights. In these cases, the value of the resources in question is split between the legal owner and the unit exploiting the resources. (See also paragraphs 14.xxx (SNA).)* The treatment of a split asset approach in this paragraph shows a semantic difficulty. Why is government considered only the 'legal' owner and not 'economic owner' for its share? In all cases where a market entity makes a purchase of an asset, the valuation of the asset by the purchaser (i.e. at micro economic level) is higher than the purchase price, otherwise it would not engage in the transaction (and no one made profits). This is not unique to natural resources but rather a characteristic of all purchases (see previous comments on consumer and producer surpluses). Furthermore, the exploiter doesn't appropriate anything (which seems a euphemism for stealing recorded as OVC, K.4).

In **paragraph 4.168**, regarding the "*net present value of future benefits*", it is written that "*It should be noted, however, that the method as such is theoretically sound as can often be verified for a number of financial assets*". What is meant with this sentence? First, prices are not set by the actual future benefits but the expected future benefits (including holding gains) at the moment of purchase, that is an important nuance to make. Second, what financial assets are verified this way? Also, just because a method works for financial assets, where contractual future cash streams are set in a contract, doesn't make it practicable for non-financial assets where there are much more uncertainties.

In **paragraph 4.171** or in a separate paragraph in this section on valuation an elaboration on tradability and negotiability might be helpful as the two concepts are not the same. Negotiability is linked to the contract at creation (e.g. it sets an interest rate etc.), while tradability is related to the moment after creation leaving the initial contract unchanged. E.g. a mortgage loan is negotiated but non-tradeable.

Also in **paragraph 4.171**: "*Moreover, conceptually, the nominal value of a debt instrument can also be calculated by discounting future interest and principal payments at the existing contractual interest rate(s) on the instrument; these interest rates may be fixed rate or variable rate. However, some would argue that such a valuation is somewhat inconsistent with a valuation at fair value of the relevant asset positions, while others would argue that* *nominal values, reflecting the actual payments of principal to be made in the future, including interest accrued to date, can be considered as a good approximation of the fair value. Nominal value is also considered useful because it shows actual legal liability and the starting point of creditor recovery behaviour."*. It seems that this part, which is not easy to read, discusses not nominal versus market valuation but rather the debtor versus the creditor approach. If that is the case, it should conclude that the debtor approach is used in macro-economic statistics. Furthermore it seems to suggest that with the debtor approach the market value of the financial instrument is lost, which is not the case as these would be shown as revaluation (K.7) of the market value when market interest rates start to deviate from the interest rate at issuance.

In **paragraph 4.174** the word 'expected' should be added before 'future pension benefits'.

In **paragraph 4.181** "*A less obvious mingling of transactions occurs when the provision of an asset and the related money payment or payments do not take place simultaneously. When the time gap becomes unusually long and the amount of trade credit extended is very large, the conclusion may be that implicitly an interest fee has been charged. This recording of interest becomes even more relevant in periods of high inflation and interest. In all these such extreme cases, the actual payment or payments should be adjusted for accrued interest in order to arrive at the correct value of the asset transferred. Such adjustments are generally not recommended for*

normal trade credit". First, the 'and' above could better be replaced with 'and/or'. Second, instead of arguing that interest should be recorded it should be argued that although business accounting might call this a trade credit (semantics), in economic substance such long term credits arrangement constitutes a loan. Interest should accrue on loans regardless of the cash flows.

The sentence "*Goods are considered to change economic ownership when the parties enter the goods in their books and make a corresponding change to their financial assets and liabilities."* in **paragraph 4.208** is circular at best ("something is recorded when it is recorded") but at worst it seems a contradiction with what is written just above in **paragraph 4.203**: "*A change in ownership from an economic point of view means that all risks, rewards, and rights and responsibilities of ownership in practice are transferred*".

In **paragraph 4.222** the new sentence "*In practice, when the delay between the transaction and settlement is short, the time of settlement may be considered as an acceptable proxy, so that accounts receivable/payable would not arise. In cases of longer delays, however, accounts receivable/payable should be identified*" is a pragmatic consideration that is hurting the methodological soundness. It is hurting as it seems to suggest that only long-term payables / receivables are to be recorded, while it is sound methodology to reclassify long-term payables / receivables into loans. Therefore this new sentence can better go.

Paragraph 4.269 on netting states: "*Individual units or sectors (...)*". 'The 'or sectors' is redundant and confusing. It is redundant, because if you net at institutional unit level and then aggregate to a (sub)sector, automatically also the subsector is netted. It is confusing as consolidation is between units while netting is within a unit. Therefore this doesn't help in explaining the difference between the two concepts. ESA 2010 paragraph 5.28 is much better in this respect.

We welcome **paragraph 4.281** that clearly states that you cannot consolidate P.1 and P.2. This seems in contradiction with **paragraph 30.81** though that seems to wrongly copy GFSM.

Paragraph 4.275 reads: "*In some cases, a clear distinction between assets and liabilities may not be feasible (such as for financial derivatives in the form of forward contracts, which could change between assets and liabilities). In such cases, it may not be possible to apply the **<u>net</u>** recording principle, which requires separate presentation of transactions in assets and transactions in liabilities. For such financial instruments, net transactions in assets and liabilities combined may have to be recorded*". It seems that the underlined 'net' needs to be replaced by 'gross'.

It seems that in the sub-section on netting it is missing that national accounts is necessarily a gross recording system as this is the only way to achieve quadruple accounting. For example, netting assets and liabilities is problematic as the counterparties of these transactions/stocks are not the same.

In **section F '**Symmetry of reporting' it seems missing in this section on constancy that inconsistencies in the data (as a result of the reasons summarised) are not to be balanced (artificially reduced) but rather should be shown. This is very important for at least two reasons:

1. Artificial reductions of discrepancies muddle the data. And since it is a closes system it will probably hurt many accounts in different ways.
2. The discrepancy itself is very useful metadata for users.

Regarding **paragraph 4.292 (and 4.299) of the annex**, we note that rents (D.45) are part of the production costs in the 2025 SNA. What is missing is a discussion on the impact on operating surplus (B.2).

When it comes to own account capital formation (P.12/P.51g) mentioned in **paragraph 4.308** it might be mentioned that depreciation should not feed into new capital formation when using the sum of costs (to avoid an endless loop of P.51cà P.51g).

Regarding **paragraph 4.317 *and* 4.318**, should the possibility of negative resource rent be discussed as it is calculated as residual (i.e. a net figure)?

Regarding this sentence in **paragraphs 4.318**: "*The question of which discount rate is appropriate in which circumstances is also an important question to answer. Because of these issues, the method is often considered as a last resort option, to be applied only for certain classes of assets, such as natural resources*". Thank you for acknowledging this, considering the potential huge impact on key aggregates and balancing items it would be very informative if the question was also actually answered.

Thank you for adding "by the extractor" in this sentence of **paragraph 4.319**: "In doing so, the government may not appropriate the full resource rent that can be derived from the relevant resource by the extractor", we propose to additionally add "(market producer)".This would help clarify that the extractor is indeed more efficient in extracting than civil servants are in extracting and that this efficiency difference is rightfully attributed as profit for the extractor in the same way that any contractor (market producer) with government is expected to make a profit from its work.

We note this sentence in **paragraphs 4.319** where the option of recording an AN.2 type asset is dismissed because it is "(…) *Moreover, as these rights are often not transferable, so without a price being established in a market, there is no observable value of the rights. However, the private corporation as a going concern still derives value from having the rights to extract, in the form of part of the resource rents being appropriated. It is therefore recommended to apply the split-asset approach, according to which the assets in question are recorded in the accounts of the legal owner and the extractor, in proportion to the share of the resource rent appropriated*". That seems a rather schizophrenic line of argumentation in a chapter and annex that is created to discuss options for pricing assets that are not observed on the marked. Furthermore, this same problem exists for the split asset approach that is advocated, as otherwise there was no need for the NPV of resource rent method. Lastly, the exploiter doesn't appropriate anything (which is a euphemism for stealing, recorded as OVC, K.4).

SE-Michael Wolf_Sweden Statistics Sweden

<u>The asset boundary</u>

Comments: The proposal for revised SNA implies in our view a different interpretation of the definition of investments and assets. The inclusion of renewable energy resources and marketing assets (currently put on the research agenda) is not in line with the principles of national accounts and will if included mean that measuring supply and use of products in volumes no longer is the main objective of the SNA. These assets are defined from the perspective of income received by utilising the possibilities of natural flows and phaenomena or creating consumer loyalty which makes it possible to charge higher prices.

Assets can be stored and used when needed. Stored in this sense also means temporarily not used in production. This is the case for wind turbines that are shut of use if the wind is blowing too hard. The turbines can only utilise the wind energy when they are used. The wind on the other hand cannot be stored and turned on when needed. In this sense the wind and solar radiation are natural phaenomena like rain with the difference that water can be stored.

Furthermore, natural flows like wind, rain and solar radiation are used as inputs in the production process and not as the equipment transforming inputs. The input of solar radiation is transformed in the solar panel to electrical currency that can be used to charge a battery. But as inputs wind and solar radiation cannot be stored in the inventory of raw materials for later use. So, wind and solar radiation does not qualify as assets in any respect understood in national accounting.

To avoid future misinterpretations the definition of assets, capital formation and investments need to be better aligned with the principles of national accounting as a social accounting framework. The word 'benefit' is not precise enough and has been interpreted as being any kind of benefit that impacts income received. We should prefer to restrict the meaning to the economic benefits that are consistent with the national accounts' framework.

By 'using the item' we should understand using an asset in production of value added in volume. This is achieved by producing goods and services adding to the resources of the society. Here we put emphasis on the quantity of output and not the value. This difference is crucial and the main reason for differences in the understanding of NA. The recording according to the SNA is not primarily about values and volumes are not equal to real values.

We propose the follow wording of para 4.5:

4.5 ***An asset is a store of value representing a benefit or series of benefits accruing to the economic owner by holding the item over a period of time or using the item in a productive activity. By holding the asset, it functions as a means of carrying forward value from one accounting period to another. By using the asset in production, it contributes to output in volume.*** Assets may be financial in nature or not. For almost all financial assets, there is a corresponding [financial] liability. *A liability is established when one unit (the debtor) is obliged, under specific circumstances, to provide a payment or series of payments to another unit (the creditor).* An elaboration of these definitions and the concepts embodied in them as well as a typology of the different assets and liabilities in the SNA/BPM is given in section C of this chapter.

<u>Human capital</u>

Comments: The title of part 7 is a little bit awkward. It is not about exclusion, it is about what's defined as assets in the SNA. Talking about exclusion is like saying that there is another definition that is better aligned to social accounting, in this case referring to microeconomic theory. But social accounting is not the same as micro theory.

We propose the following wording for para. 4.121:

7. The SNA asset boundary does not regard the following items as assets defined in the social accounting framework

4.121 Human capital as defined in microeconomic theory is not treated in the SNA/BPM as an asset in the integrated framework of national accounts; see paragraphs 1.77 and 1.78. In social accounting humans as individuals, alone or in groups like households and enterprises, are acting as independent economic agents whose activities are pictured. The individual person is indivisible and the capabilities (skill, knowledge and experience) that make up 'human capital' cannot be transferred separately from the individual who has acquired them and therefore these capabilities cannot be treated as a separate transferrable asset, a 'human capital' to be used in production. Picturing a slave society would imply that slaves but not free humans are defined as 'human capital'. Besides that such a treatment in the SNA would be regarded unethical, it would not cover the entire population which is the aim of 'human capital' as defined in economics. However, as explained in chapter 35, it is encouraged to compile extended accounts on education and training, including experimental estimates of the value of human capital.

Sum-of-costs approach

As pointed out in our general comments the sum-of-costs approach used for non-market output should not include a return to capital. The economic objective and behaviour of non-market producers differs from market producers in this respect. The reason why non-profit institutions should be assumed to earn profit is not only a semantic inconsistency. Profit is the main reason why private financial capital is invested in production. Government on the other hand has a different objective in providing the population with services in short supply without any regards of monetary gain.

For non-market producers the output value of non-market output should be valued according to the observed social costs and these also exclude rents and depletion. Rents paid for the use of natural resources is part of the redistribution of income and does not add any value to the society. Depletion is not a social cost since it does not imply that human effort is consumed in the production process.

In case it is analytically interesting to value non-market output by adding an opportunity cost of capital and other expenditures that the output value should cover this should be part of the extended accounts provided by the SNA.

The return on capital for market producers is intended to cover for all the expenditures, except production costs, a market producer might have and that includes among all interest, insurance, rents and dividends.

We propose the following wording for para. 4.292 and 4.293:

4.292 A method, which is frequently applied in the system of national accounts, is the sum-of-costs method. According to this method, it is assumed that market prices, or exchange values, can be approximated by summing up the costs of production, as follows:

- intermediate consumption;
- remuneration of employees;
- other taxes less subsidies on production;
- depreciation; and
- return on capital used in production.

4.293 This method is applied in various circumstances, in particular in the following cases:

- own-account production of fixed assets; and
- although less frequently, other goods produced for own final use, for which it is not feasible to make an estimate on the basis of similar goods traded on the market.

� Jorrit Zwijnenburg_OECD

4.318: The sentence “The question of which discount rate [...] such as natural resources”, suggests different discount rates may be used in different circumstances. However, the view of the EGNC is instead that a single discount rate needs to be used for all assets (and preferably the same rate by all countries) as the element of risk is absorbed in the rate of return to fixed assets. Furthermore, “last resort” sounds quite negative for a method that is the de facto default approach and the work horse of all natural resources valuation including depletion.

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4 Do you have any other concerns with this chapter?

9 Comments

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

This chapter is still very long and covers a lot of topics. It would be helpful to split this chapter to keep it focused, particularly to draw out key issues clearly like economic ownership. Similarly, "Annex: Methods to value transactions and stocks" could be better presented as a separate document including worked examples.

The UK still recommends undoing the re-ordering of the text and putting stocks first. This will also aid usability for compilers who currently will understand
and recognise this ordering. The chapter title would therefore benefit from a change in name.

- **Nicola Massarelli_Eurostat**

This chapter may mention in Sections B and especially C1 (partitioning of transactions and assets) the specific example of Emissions Trading Permits as recommended in the GN

- **Jorrit Zwijnenburg_OECD**

4.57: Reference to the increased role of crypto assets without a corresponding liability may be made here.

Section 3: The order of the discussion of the accounting rules in Chapter 3 slightly differs from the order here, i.e., in Chapter 3 time of recording is discussed before valuation. You may use the same order in Chapter 4 (or adjust the order in Chapter 3).

4.245: Units of crypto could also be referenced as ‘other standards of value’.

4.250: Again, it may be useful to also add some text on crypto, maybe not directly putting it on a par with domestic and foreign currency, but at least as an instrument with its own unit of account.

- **Amanda Driver_SA_Biodiversity Consultant**

4.115 & 4.116

This seems to be the first time produced and non-produced natural capital is discussed.

4.115 says “In view of arriving at an improved accounting for the role of the environment in economic developments, natural capital is separately identified, grouping together both produced and non-produced natural resources.”

This is not consistent with the definition of natural resources in several other places as assets that are “naturally occurring”, sometimes with no qualification that in some cases they are cultivated.

It also seems like quite a thin rationale for lumping cultivated biological resources with natural resources and thus natural capital.

4.116 “Produced non-financial assets come into being via the production process or as imports. The same holds for produced natural capital, such as cultivated biological resources.”

Are there other forms of produced natural capital than cultivated biological resources? If not rather say “i.e. cultivated biological resources”.

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

3 Comments

- **Smail Oubelaid Maroc _IMF Expert**

Yes

- **Regina Loo _Singapore Department of Statistics**

Yes

- **Mila Moreno Blasco _España Banco de España**

No, we have one comment to the transactions in existing assets

Our comment is related to paragraphs **4.24-4.25 and 9.1** about t**ransactions in existing assets**. These paragraphs state that when a financial instrument issued by a nonresident is sold by a resident in one institutional sector to a resident in another sector, the change in asset composition within the IIP is recorded as a reclassification entry rather than as transaction in the financial account.

We consider these paragraphs inconsistent with the creditor/debtor approach, leading to discrepancies between the BOP and the National Accounts. Additionally, it is crucial to consider practical implementation challenges, especially given the variations in securities holdings compilation systems across regions. In Europe, for instance, most systems rely on monthly stock data (security-by-security) for resident holdings of securities issued abroad. Furthermore, the residual approach (total issuance minus resident holdings) is commonly used for nonresident holdings. Therefore, the approach of treating transactions between two institutional sectors as reclassification entries rather than recording them directly in the financial account is not practically applicable. Taking this into account we consider that in, BPM7 and SNA 2025, the creditor/debtor approach (counterpart of transactions to be the sector for which the asset transacted is a liability –or other way around) should be allowed to avoid BoP/NA inconsistencies and compilation difficulties.

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

Yes

- **Regina Loo _Singapore Department of Statistics**

Yes

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

No

- **Regina Loo _Singapore Department of Statistics**

Inclusion of marketing assets as non-produced non-financial assets in 2025 SNA chapter 4 paragraph 4.117 seems to contradict with comments in page 227 of chapter 5 in the draft consolidated BPM chapters which indicated that marketing assets are classified as produced non-financial assets.

We would like to seek clarification on the classification of marketing assets and whether the acquisition/ disposal of marketing assets is classified under the services or capital account.

Additionally, some of the terms used are not consistent with the terminology found in chapter 20. Suggest to review all chapters to ensure that the changes to specific terms have been incorporated, for instance, "finance lease" instead of "financial lease".

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4. Do you have any other concerns with this chapter?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

No

- **Regina Loo _Singapore Department of Statistics**

No

Chapter 5: Residence, institutional units and sectors

3 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Nourah Aljehani Saudi Arabia General authority for statstics**

comments have been reflected

- **Noemi Frisch _Israel ICBS**

5.160 to 5.162 the inclusion in broad money is not so clear. F.ex.
" if the electronic money issued is included in broad money" should perhaps be explained more - when and how is it included in broad money?

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

yes

- **Laura Wahrig _Eurostat**

please see comments under question 3.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

11 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Mark de Haan Netherlands**
    - Paragraph 5.251d: When splitting an economy, there may also be reclassifications, just like with mergers.

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Luis Angel Maza _Spain Banco de España**

Paragraph 5.169 All real estate investment funds should be classified as financial institutions, even if their investments are not purely financial. The primary reason for this classification is that these funds provide small and medium-sized investors with access to diversified investments that would otherwise be inaccessible. Therefore, the main economic function they offer is financial intermediation in channeling savings into these investment vehicles. This is why the legislator often grants them special treatment in terms of taxation and financial supervision of their activities. Therefore, vehicles that facilitate the investment of small savings into real estate should be considered financial institutions.

Additionally, determining whether an investment vehicle is financial or non-financial based on its investment portfolio composition, particularly if it includes foreign real estate, poses practical challenges. These challenges include defining the scope of entities subject to reporting, managing the entry and exit of official registers in jurisdictions where such registration is mandatory, and addressing the associated tax implications.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Paras 5.159 and 5.161: for sake of clarity, it would be useful to specify that only short-term liabilities of deposit-taking are part of broad money: "The short-term liabilities of deposit-taking corporations ..."

Para 5.146 : Maybe insurance is missing in the list of financial services: "... the production of financial services is the result of financial intermediation, financial risk management, liquidity transformation, or auxiliary financial activities and insurance."

- **Jorrit Zwijnenburg_OECD**

5.2 to 5.9: These paragraphs discuss institutional units, but no reference is made to constructs such as investment funds, trust funds and pension funds that can also qualify as separate entities, if we understand correctly (see for example 5.105)? It may be useful to dedicate some text to that.

5.90: This paragraph has become a bit confusing, as it seems to relate to SPEs but also to entities that are not SPEs (i.e., "whether a unit has all or none of the characteristics described in paragraph 5.86 (a-d)"). It used to work in the 2008 SNA, but as the definition of SPEs has been narrowed down, the three categories can no longer be presented as types of SPEs, creating the current confusion. So, as it concerns a more generic rule, we are wondering whether it wouldn't just suffice to simply mention that SPEs should be "allocated to sector and industry according to its principal activity" and then just referring to where people may find a list of the most common types of SPEs, without listing the three categories for which the generic rule does not apply? These can then just be presented in the subsequent sections as is currently the case, i.e., there may not be a need to separately introduce them.

5.106-5.107: We had a hard time understanding the text, mainly to understand that the section distinguishes three entities instead of two, i.e., treating the trust fund itself as a potential separate unit with its own autonomy of decision-making. As it is quite difficult to imagine a trust fund (which seems a construct created by other units) to have its own autonomy of decision-making, this may require some further explanation. This may also help to understand the decision tree and the first sentence of 5.107. In 5.106, it may be useful to slightly rephrase the sentence “If the risks and rewards are instead allocated to the beneficiary/investor or beneficiaries/investors, one may also assume that the trust or fund does not have any autonomy of decision in the case of a single beneficiary who takes all the risks and rewards of the investment strategy”, removing the reference to multiple beneficiaries/investors as these are ruled out by the latter part of the sentence.

5.162: It may be explained that this excludes cryptocurrencies not issued by the central bank.

- **Marshall Reinsdorf_ISWGNA Editorial Team**

5.40 should mention that further guidance is available in chapter 31.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

11 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

The UK note that the content in this chapter is repeated in Chapter 29. We suggest that these chapters could be merged, removing the repeated material. There are also several inconsistencies between the two chapters.

The chapter is not clear on government owned foreign entities, as outlined in figure 5.1 of the chapter.

Within the definition of “Central Bank” there is use of the term “financial stability” however, there is no definition of financial stability or even talk about how its captured. A discussion on Financial Stability Indicators (FSI) has not been included, which are already used as a measure of financial stability by lots of countries around the world.

Specific

Paragraph 5.38 should cross reference paragraph 5.115 so that it is clear in 5.38 what “indirect transmission of control” means.

Examples of inconsistencies:

Electronic money institutions, qualifier in chapter 5 but deposit
taking qualifications are not in 29.51.

Peer to peer lending agencies within financial auxiliaries is included in chapter 29 but not in chapter 5.

Table 5.1 – what happens if a government owns a foreign entity? 5.100, if aligned with 5.39 the government would be a MNC.

5.49. Issue of negative equity seems to be incorrect. 14.88 seems to be the correct version.

- **Martha Düker_Deutsche Bundesbank**

Paragraph 5.169:
Our first concern is of conceptual nature: Since domestic real estate is treated as non-financial asset, and cross-border real estate as financial asset, the sector of the investing entity would depend on the location of the real estate. In the case of summing up national contributions to a geographic aggregate (e.g. euro area), a part of the cross-border area from a national view turns into domestic, causing the entity to switch sector from financial

to non-financial. How should this be implemented technically? Also how would this entity be classified in a business register such as RIAD?
In our perspective, entities that look and behave like investment funds should be classified as such, independent of their type of assets. Their purpose is to match investors with assets by acting as an intermediary incurring liabilities by themselves, which is clearly a financial service. A treatment as non-financial corporation would be rather counter-intuitive, especially to data users not that familiar with the details of the SNA. Adding to that confusion, in SNA draft chapter 29 lists "real estate investment funds" as subsector of investment funds, while the key information that this fund type excludes directly held real estate is placed in a different subchapter.
More practically, the proposed treatment would also raise the question on how to treat the shares issued by these entities. Since investment fund shares can only be issued by "true" investment funds by definition (at least following the current SNA), they would have to be classified as other equity, which isn't usually captured by ISIN-based securities holding statistics (such as the SHSS in the euro area). Even assuming these real estate funds might still be part of investment fund data collections, the information about who holds their shares will get lost or at least suffer substantial quality loss.
Therefore, we would rather maintain the classification of real estate funds as financial corporations as suggested in the Guidance Note F.1.

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

5.5 6th line: Should it be "a household" and not "the household"?

Box for BPM7: It would be better to avoid references to handbooks that do not undergo the same type of consultation procedure as the SNA.

Box for BPM7: "(As discussed in paragraphs 10.124–10.125, institutional units that hold assets on behalf of their owners are providers of financial services to their owners.)" This statement without further qualification seems at odds with definition of institutional unit, e.g. ESA 2010 2.22 about substantive control over assets.

5.20 and 5.21: The recording of (collective) consumption expenditure should be avoided for the central bank (see also **paragraphs 1.27c and 3.105)**. This could have been achieved through imputation of a tax and recording of collective consumption in the general government sector. In any case, the recording of consumption expenditure should be clearly limited to core central bank functions, which is not the case with changes proposed to 5.20-5.23, such that the distinction between S.13 and S.121 is blurred. In this context, a much more severe issue arises in figure 5.1 “does the unit relate to the central bank?”. This could be taken to imply that any non-market entity in some way related to the central bank could be classified in the financial corporation sector. That should be avoided in order to maintain some sense of international comparability.

5.26 contains highly appreciated clarification that technological innovation in providing the same product does not change the industry and product classification nor the sector classification. However, use of specific terms such as “Fintech”, for which it is hard to find any meaningful definition should be avoided.

Figure 5.1: Can the classification scheme arrive at a public corporation that is non-resident? The problem arises from changing the order of the schema. I.e. 2008 SNA figure 4.1 does not suffer from the same problem. Furthermore this decision tree sometimes has only one ‘branch’, i.e. there is no direction to be chosen (e.g. “does the unit meet the definition of an SPE’?

It seems not necessary to add “central bank” in paragraph 5.31, 5.33, etc. This is fully sufficient in 5.30. However, the definition of central bank activity is needed so as to prevent lack of harmonisation of what is included in S.121 and S.13. In this sense, the last sentence in 5.29 needs to be rephrased much more cautiously.

5.42 and table below: Why should this be included in the SNA? The table numbering 4.2 seems wrong. What is meant with “The full institutional sector detail is required for external accounts to be fully integrated with monetary, flow of funds, and other financial data.”? How could national accounts and balance of payments data be fully integrated with sectorisation employed in primary statistics not subject to statistical (harmonisation) adjustments?

5.44 seems to clearly advocate the debtor-creditor principle, which is much appreciated, after 2008 SNA was somewhat ambiguous on the issue. Why is this paragraph proposed to be kept out of SNA (but in BPM7)? Please refer also to our comments on chapter 37.

5.47 “through the selling of all or most of their goods and/or services at economically significant prices”: this addition should be limited to “through the selling of their goods and/or services at economically significant prices”.

5.56 “A quasi-corporation is also identified when preliminary expenses **and financial transactions**, including for mining rights, license fees, site preparation, building permits, purchase taxes, local office expenses, and lawyers’ fees, are incurred by a non-resident unit, prior to establishing a legal entity." Bold should be added, please. "If the project does not subsequently go into operation, the value of the direct investment is eliminated by an entry for other changes in the volume of assets or liabilities." Financial and non-financial assets held by the quasi-corporation should presumably not be eliminated through OCV. What kind of K-flow is meant here?

5.69 should clarify that the licences or permit held by the notional resident unit are also recorded on its balance sheet.

5.70 should leave some space for exceptions: for example joint ventures of several governments are apportioned to the respective governments rather than recording an equity stake according to ESA 20.318.

5.82 ISIC rev 4 reference is outdated or will be outdated.

5.102 "*A government may create a SPE to undertake government borrowing, or incur government outlays, or collect revenue abroad for fiscal policy purposes. Even if there are no actual economic flows recorded between the government and the SPE related to these fiscal activities, flows and stock positions should be imputed in the accounts of both the government and the rest of the world to reflect the fiscal activities of the government undertaken by the SPE. (More detailed guidance is provided in chapter 30/BPM7 chapter 8.)"* We suggest to delete "for fiscal policy purposes" as it is unclear what these could be.

5.108 Thank you for the rephrasing in this paragraph. Regarding the following sentence might "*In addition to the above decision tree in Figure 5.2, if the fund manager is not exposed to the risks and rewards of the accumulated assets of the fund and the investors/beneficiaries are all public sector entities then it may be most appropriate to consider government as the ultimate investor/beneficiary and consolidate the fund within the government sector rather than treat it as a public financial corporation*" the notion of 'may be most appropriate' seems a bit vague, please use "is" instead of "may".

5.139 "Most of these goods and services represent individual consumption but it is possible for NPISHs to provide collective services." How should these be recorded in functional classification COPNI? In paragraph 10.113 provides an example: *a privately funded non-profit institution may undertake medical research and make its results freely available*. As R&D is capitalised (sum of costs, P.12/P.51g) and P.51c is to be excluded to avoid a perpetual loop, it is not clear how this should impact P.3. Or is it proposed to exclude freely available R&D from the asset definition (which we would fully support as there are no enforceable property rights).

5.154 The paragraph relating to Fintech might be reconsidered. 1/ Sector and new products, if any, are two different things that should not be mixed up. 2/ How could a supplementary “of which“ subsector position be described when likely many of the technological innovations take place in existing financial intermediaries or rather non-financial corporations providing computing services to financial intermediaries?

5.197 It seems that the notion of NPI changes in the update of SNA. However, why would it be meaningful to show NPIs as an of which item? Few entities in general government behave as a market producer and aim to make a profit. Furthermore, it is not at all clear on the basis of which guidance note or recommendation from the consolidated list of recommendations this change was made.

5.247 Not clear why “IMF, World Bank Group, BIS, and regional development banks” are considered to conduct financial intermediation. Was this addition part of consolidated list of recommendations? As it seems not, we suggest to drop this. They rather seem to conduct (governments’) policy based lending and/or regulatory services.

- **Jorrit Zwijnenburg_OECD**

5.4 (and 5.222): In guidance note WS.2 the term ‘private household’ is used instead of ‘individual household’ to distinguish them from ‘institutional households’. This is also how these households are referred to in social statistics. In accordance, this term is also used in paragraphs 5.230, 32.92, 34.47 and 34.54. We have noticed that the term ‘individual household’ is also used throughout the draft SNA, but this then normally refers to allocating amounts to households at the micro level (so covering both private and institutional households). It is also used several times to refer to the fact that STiK is allocated to ‘individual households’. In that regard, we suggest to replace ‘individual household’ with ‘private household’ here. The same goes for the references in 5.222 and 32.14.

5.107: Not sure if this text is fully correct: “trusts and similar types of funds should only be treated as separate institutional unit in the case that the trustee, or fund manager, is not exposed to the risks and the rewards, and instead the risks and rewards are assumed by multiple beneficiaries/investors”. I understand the latter part, but the text seems to exclude the situation where the trustee of fund manager is exposed to the risks and rewards, whereas I think that in that case they would always qualify as a separate institutional unit, correct?

5.165: The definition refers to non-MMFs investing, among others, in non-financial assets. However, 5.169 and 5.170 explain that these funds would qualify as non-financial corporations. In that regard, the definition may need to be adjusted.

4 Do you have any other concerns with this chapter?

9 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

A brief elaboration on economically significant prices although the term has been described somewhere in chapters.

- **Karen Kuhn_South Africa RB**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 7. It is important to be clearer regarding the management of trusts when they change institutional sectors, explaining whether production calculations are performed and, for example, a secondary product remains in the government sector or what its treatment would be.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

Para 5.62: “A non-resident with a resource lease is classified as incurring rent and no notional unit is automatically created.” Works at the Expert Group on Natural Capital leads to the need for clarification on the recording of depletion in case of fishing (under quota) in territorial waters by non-resident operator. Our understanding is that a non-resident operator would record total depletion in its production account and record in case of split asset a negative imputed rent to government of the host country up to the depletion borne by the latter (100% in the absence of split-asset), for the latter to record depletion in its capital account. (In line with example 3 of the WS8). In case different approaches should be applied, a clarification would be needed in this paragraph and others of the draft SNA.

- **Laura Wahrig _Eurostat**

please see comment under question 3.

- **Jorrit Zwijnenburg_OECD**

5.65: Regarding the treatment of depletion caused by residents abroad, e.g., to fish stocks in other countries' territorial waters (and the inverse problem), it would seem logical to include this as a cost of production, because the depletion of these foreign stocks by resident operators will (eventually) undermine national production. However, this raises several conceptual problems:

  - If these assets remain on the balance sheet of the foreign economies, it would make sense to somehow distribute/allocate these depletion costs caused abroad for instance as 'depletion exports' (in the distribution of income account, in the depletion line which is now used to allocate depletion cost to government, here they would go to RoW).
  - An alternative would be to split these assets between foreign government (as legal owner) and the resident economy (as legal owner). The asset value of the foreign government could be based on rent (or quota payments) made, and the remainder based on RR of the resident fishers (minus the rents paid). If this option is followed, the question arises whether a notional unit would need to be created or not.

5.146: It is mentioned that "the provision of financial services is typically subject to strict regulation [...]", but this has changed quite a bit over the past two decades in view of the increase in non-bank financial intermediation that led to the great financial crisis and still plays an important role. You may want to consider rephrasing and/or explicitly mentioning non-bank financial intermediation here.

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

Yes

- **Regina Loo _Singapore Department of Statistics**

Yes

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

Yes

- **Regina Loo _Singapore Department of Statistics**

Yes

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

2 Comments

Smail Oubelaid Maroc _IMF Expert

No

- **Regina Loo _Singapore Department of Statistics**

No

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4. Do you have any other concerns with this chapter?

2 Comments

- **Smail Oubelaid Maroc _IMF Expert**

No

- **Regina Loo _Singapore Department of Statistics**

No

Chapter 6: Enterprises, establishments and industries

1 Comment

- **Noemi Frisch _Israel ICBS**

6.35 and 6.36 could perhaps be shorter and placed after 6.16

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes:

6.36. UK agrees that this should be on the research agenda, re: statistical unit approach.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Paragraph 6.1: we are concerned on the addition of the "central bank" to the paragraph, where production is concerned and quasi-corporations are discussed. It gives the impression as though various quasi-corporation, not necessarily undertaking central bank functions, could be recognised and included in S.12 rather than S.13. We think the second addition should be dropped. Moreover, this paragraph misses a reference to quasi-corporations being recognised when they are selling at economically significant prices.

Paragraph 6.6 (and general): please update for ISIC 5, this is already available since some time. It would be better to do this before the consultation so that any errors can be spotted.

It is not clear why the new **paragraphs 6.35-6.36** on "*More general considerations about the choice of units for describing the production process*" are needed. It concludes that there is no conclusions. Also other parts of SNA are quite clear enough about the limits of each unit. If anything a graph as in the NACE manual could be considered (page 23 of NACE rev 2.0). Research agenda items are typically described on the research agenda in Annex. The paragraphs should be moved there or dropped.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

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4 Do you have any other concerns with this chapter?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

It will be better to put list of 21 industries as per ISIC revision 4 and some examples of disaggregation upto class for understanding more clearly.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

Chapter 7: Production account

5 Comments

- **Tatsuya Sekiguchi_Japan NA**

Paragraphs: 7.228 and 7.229 (Staking of crypto assets)

In the current draft of 2025 SNA, validation services in the case of mining (proof of work) are mainly explained. On the other hand, explanations on other types of validation services, such as staking, are quite limited. They are made only in Chapter 7 (paragraphs: 7.228 and 7.229). Further explanations regarding the staking of crypto assets should be included in the 2025 SNA or supplementary documents, such as a compilation guidance.

- **Tringa Cerkini Switzerland Federal Statistical Office**

Paragraph 7.225 refers to Chapter 24 for more details on "certain cases where the formula for life insurance policies may need to be applied". However, Chapter 24 does not provide any information on the measurement of output for these 'certain cases'.

- **Benson Sim**

As noted in the recent note on loyalty programmes (https://unstats.un.org/unsd/nationalaccount/aeg/2024/M26/M26_7_Loyalty_Programmes.pdf), the draft of the 2025 SNA seems to associate loyalty programmes with goods (paragraph 7.162). However, it is common knowledge that loyalty rewards can be earned from spending on services, other transactions such as payment of fines and financial investments such as deposits in ban accounts. The 2025 SNA should note that loyalty rewards can be earned from these transactions as well, while acknowledging that a proper accounting of loyalty rewards in economic statistics will need to be included in the post 2025 SNA research agenda.

- **Benson Sim**

Paragraph 7.214-change "technical reserves" to "entitlements" to be consistent with the wording in paragraph 7.215.

- **Noemi Frisch _Israel ICBS**

7.22 Is the sentence: “It is important to note that these knowledge-capturing products should be recorded as either goods or services, and that they should not be classified as a distinct category of products.” meaningful? If for any reason one wanted to have a separate category for knowledge-capturing products, why is that not allowed? – the category could later be added to goods or services as preferred (not to mention the larger question of the usefulness of classification in goods and services in general).

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

10 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Generally yes:

7.15 - it is unclear to the UK why these wording revisions have been made. The concept of meaningful demand is a core one within economics and there is no purpose served by deleting it.

7.15 necessary. Suggest reversing the deletions.

Strongly support the new paragraph 7.31.

- **Nicola Massarelli_Eurostat**

Not completely.

In the recommendations of DZ.7, DZ.8, DZ.9 there were suggestions to clarify the current text concerning respectively (1) AI, (2) Cloud Computing and (3) Digital intermediation platforms, respectively in sections (1) B1 and F-end, (2) F-end, (3) F5. No specific edits were added for this.

WS.6 recommends including in Ch 7 a reference to accounting for depletion in physical and monetary terms. This is not covered in this chapter.

Data could be usefully included in para 7.22 – Knowledge capturing products – as part of the existing list of intellectual property products, as suggested by the recommendation impact note for chapter 7.

Data and databases should also be mentioned in para 7.232 in the list of intellectual property products.

- **Jorrit Zwijnenburg_OECD**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Paragraph 7.27 (also 7.33) appears somewhat biased as the Swedish statistical office has already pointed out. The reason for including in own account production the production of electricity through solar panels, but not including the production of warm water (heating) through solar panels is not apparent. Why should these be treated differently. Moreover, the production of heat through geothermal heat or heat pumps is included in the production boundary, but the production of heat through burning wood harvested from own land is excluded. The logic of this is not immediately apparent. In colder climates, isn't the heating an integrated part of the dwelling that does not need to be separated out?

New **paragraphs 7.40-7.46** on "free" products uses the term subsidy and subsidizing without meaning D.3 (as it talks about market producers that lowers it prices of one part (say printers) to boost sales of other parts (say cartridges) of the company. It is really better to find different wording. All the paragraphs are not clear in describing the implication of the "bundling" on the recording of value added by industry. What about taxes on these digital platforms (usually non-resident)? Also, cannot the opposite occur? The initial product is expensive but benefits from free software updates? **7.42** GDP is underestimated in the period when the investment good is sold. With zero growth, it is overestimated in subsequent periods. **7.43** Is there a "mark-up" on the advertising service? Isn't it rather a (new) platform for advertising services similar in concept to a billboard? **7.45** uses "2008 SNA production boundary", which seems a typo.

7.78 Is "current account" still terminology used in 2025 SNA (sorry we are unsure but table 21.8a seems to suggest otherwise).

7.80 As noted by OECD, a description of the size of both depreciation and depletion should be avoided.

7.103: Exclusion of city parks and historical monuments seems a bit arbitrary. Cycling lanes along a river? Bridle paths? National parks? How should this return to capital be estimated in harmonised way? It seem no further guidance is given. Also, aren't the historical monuments a produced asset, so that using including return to capital and depreciation would result in some double-count? Or is an interest measure meant with this?

7.127: indicates why in concept, there is a double-counting by including 7.27. The quality and running cost of the heating and insulation of a dwelling will of course influence their market rental. What is the solution on this in case the rented dwellings with renewable energy installations are not negligible?

In **paragraphs 7.141** it becomes clear that the definition of production costs needed to calculate the output of non-market producers, is broadened by 1. depletion 2. A return to non-financial assets used in production 3. Rent payable on the use of non-produced non-financial assets. It should be clarified how this impacts the aggregates (in particular B.2). Also, as P.132 is calculated as the residual of P.1 (sum of production costs) minus P.11_P.12_P.12 (see **paragraph 7.143**) it means that P.132 and P.3 is impacted.

7.167 describes a tax and then recommends recording an other current transfer. But if the payment is compulsory and "not in proportion to the services provided" it should be explained why the treatment as a transaction (mutual agreement) and as a non-tax transaction is appropriate. Otherwise, readers are left to wonder about the rationale of deviating from general principles.

7.183 is not very convincing. If a single reference rate is taken, anomalies such as negative FISIM must arise. For example if the reference rate increases by 2 pp, necessarily the existing stock of government loan liabilities will be at lower average rates, and FISIM will turn negative. These anomalies have nothing whatsoever to do with banks wanting to attract new borrowers or depositors and seems a simple arithmetic consequence of following the approach listed under the 1st bullet of paragraph 7.182 (it would be better to use a, b, c instead of bullets). In paragraph 7.182, the corresponding text could better be deleted. It is also not clear what the "transfer element" is that the text refers to and how it should be recorded? Both solutions are not clearly worded. The first solution is likely to resolve negative values for financial corporations but not necessarily their counterparts (and e.g. S.13 D.41 expenditure has some policy uses…). The second solution will more likely resolve negative values at the level of counterpart, but a clearer prescription of how to apply it might be given (to ensure comparability).

In **paragraphs 7.194**:

Probably with 'trade accounts receivable' the financial instrument 'trade credit' is meant ?

More importantly, it should be avoided to indicate that a factoring company is necessarily a financial corporation. There are many factoring companies offering comprehensive services to self-employed clients (billing, book-keeping, tax declarations). The sectorisation of these corporations was not discussed, therefore it should be avoided to be descriptive on it. The issue could be solved by rephrasing to "a bank or other financial corporation or a specialised company offering factoring services.

Also in **paragraph 7.194**: it is explained why no FISIM is to be calculated "*The main reason for this view is that factoring is quite different from the more traditional type of intermediating funds, which commonly refers to the intermediation between depositors and borrowers, thereby explicitly excluding claims like other accounts receivable/payable. This line of reasoning also applies, even though in the case of factoring the accounts receivable are to be reclassified to loans."* It is perhaps better to justify the absence of FISIM by the presence of an explicit charge on the financial service provided (the fee measured as the difference between the nominal value of the initial AF.81 and the cash provided to the corporation seeking the factoring service).

Throughout the paragraph "trade credits" should be used rather than "accounts receivable/payable".

"(i) fees; (ii) interest; and (iii) compensation for possible credit defaults. From a conceptual perspective, the output of the factor is represented by the first element only. In practice, however, details about the three elements may not be separately available. " should be rephrased, perhaps: "(i) fees and (ii) interest. From a practical perspective, the output of the factor is represented by the first element only, although in concept interest is present, it is difficult to measure. " It is rather in concept that interest should be present, and in practice, only a fee is measured. It is also not clear why credit risk is not part of interest.

In **paragraphs 7.221** multi-employer schemes and ‘employer independent’ schemes (for example for unemployed and self employed) are grouped together. However, isn’t the working of these schemes are rather different (e.g. one is linked to D.12 while the other is not). It is therefore better to use two separate bullets.

In **paragraphs 7.227-7.230** it should be recognised that the recording of crypto leads to impact on net lending/borrowing (B.9). When the police confiscates bitcoin from criminals (not uncommon) it will be treated differently than the confiscation of bank accounts and cash money. This is not satisfactory considering the liquid nature of the asset. Maybe recent events indicate a need to reexamine whether the proposed solution should indeed be used or whether it may not be a more prudent option to consider the crypto assets as financial for the time being. This would be in line with preliminary treatment of ETS before ISWGNA had considered the issue.

7.257 should also describe where the services provided to producers are compulsory and not in relation to the cost (i.e. a tax). Ref. WS.14.

Does **7.285** say that for cultivated forest, that is not harvested at the optimal time, additional capital formation should be recorded? That is rather counter-intuitive. While possibly beneficial from an environmental point of view (but not necessarily in a cultivated landscape), intuitively the economic value of the timber decreases when it is left standing after the optimal time. E.g. timber stems that you cut can be used for furniture, or at least building material, while timber that falls is almost always only suitable for shredding & fuel.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

12 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Yes

- **Mark de Haan Netherlands**
    - Paragraph 7.178: Please include in the last sentence that remuneration of employees is also zero. Also, Please add the word 'financial' before 'services' ('Both types of fees are treated as **financial** services that are provided directly from the original professional providers to the shareholders').
- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Partially. Paragraph 7.141 presents an important change in the measurement of the value of non-market production provided free to households by including in the costs of production the return on non-financial assets used in production and the rent paid for the use of non-financial assets not produced.

What is the motivation for this change and what does it imply in conceptual, methodological and measurement terms?

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

7.280 appears to overstate the merits of geometric depreciation, as previous UK comments have explained. The UK recommends replacing this paragraph with
'Appropriate depreciation profiles should be applied, based on the characteristic of the asset on a case-by-case basis.'

7.41 reaches a set of conclusions which essentially reference an empirical issue but seems to be lacking an evidence base. The editors may wish to rephrase.

- **Celestino Giron_ECB**

176 to 178 describe the accounting of implicit (and explicit) charges in the investment fund industry, but they don't explain how to account for implicit financial services in deposits/loans of funds vis-a-vis banks. Please consider that in that case the attribution of the charges directly from the banks to the shareholders would be very difficult in practice; it would be preferable, in this case only, to book intermediate consumption and output of the bank for the amount of those implicit services (leading as well to zero value added by the funds).

- **Nicola Massarelli_Eurostat**

Para 7.165: Individual bank supervision is distinct from macroprudential supervision and may be explicitly mentioned: "…services related to promoting financial stability, including regulation, bank supervision and macroprudential supervision; …"

Para 7.167: If we understand correctly, this para deals with bank supervision services. It would be useful to make it explicit: "Regarding bank supervision services…". For clarity, we also suggest a reformulation of the last sentence of this paragraph: "In the case of these services, some pPayments may be made by financial corporations for the purpose of bank supervision, but these payments are typically compulsory and not in proportion to the services provided and should therefore be treated as current transfers."

Para 7.183: We suggest adjusting the paragraph as follows (new text in red): "Negative estimates of implicit financial services on loans and deposits, particularly for depositors but also for borrowers, may temporarily occur by construction given their calculation method, in cases of strong movements in the reference rate of such services. However, dDuring periods of volatile movements in reference rates and when liquidity markets begin to disfunction, considerable care should be taken in determining estimates of implicit financial services on loans and deposits. …"

New section on CAWLM (paras 7.227-7.230): This new section correctly clarifies that crypto "miners" of CAWLM are considered as producers of validation services (rather than the crypto assets themselves), with their output measured as the sum of both the validation fees and implicit fees in the form of new crypto assets coins. This "crypto" validation service therefore adds to GDP, NDP etc. It would be helpful to explain why the creation of crypto assets with a corresponding liability do not add to GDP/NDP, if only by referencing the relevant paragraphs in the Financial account chapter. This is important also in the light of the statement in para 11.173, which places CAWLM on the research agenda. If in the future the treatment of CAWLM was changed from non-produced to financial assets, this would reduce the level of GDP.

Para 7.237: "Intermediate consumption consists of […], excluding fixed assets whose consumption is recorded as depreciation.". In the SNA 2025 "fixed asset" (AN.11) is a sub-category of "Produced non-financial assets (excluding produced natural capital)" (AN.1). However, some natural capital is also subject to depreciation. AN.3 now includes some "produced assets" and "produced inventories" as well as some non-produced assets. One could add in §7.237, after the words "fixed assets", something like "and that part of natural capital".

In general, it would be useful to clarify that some Natural Capital is treated in the accounts in the same way as produced fixed capital, some other NC as produced inventories, some other NC as non-produced. AN.3 is a hybrid aggregate in this respect.

Para 7.254: suggest to add: "Research and development, own production of software, data, databases are treated as capital formation".

Para 7.264: "Depreciation is the decline, during the course of the accounting period, in the current value of the stock of fixed assets, **including (cultivated)** biological resources yielding repeat products, …". Why is cultivated in brackets? In addition, "including" suggests that cultivated biological resources yielding repeat products are part of AN.11, which is not the case. Maybe one could replace "including" with "and".

Para 7.285: A reference to §11.234 may be useful. For harmonisation of terminology one may decide whether the word "gross" should be added in 7.285 (before fixed capital formation) or deleted in 11.234. At the end of §7.285 one could add a something like ", as for typical produced fixed assets (see code AN.11)".

- **Jorrit Zwijnenburg_OECD**

7.27: Is it necessary to specify "including the production of electricity […] heat pumps" in the definition? It could also be included somewhere in the text, e.g., explicit reference is already made in 7.29 and 7.33. Otherwise, it may be important to also acknowledge that heat pumps are also used for cooling in summer; solar energy is also used for heat; heat pumps use either geothermal energy or surrounding air. In view of the latter, the text could be reworded to as "including the production of electricity, heat or cool air through the use of solar panels, wind turbines or heat pumps".

7.102: Although I agree with the formula for calculating the value of output produced for own final use, I think the current phrasing may create some confusion as it refers twice to the use of non-financial assets in the last two components, but with a different meaning. When referring to the net return to non-financial assets used in production, it refers to those non-financial assets as owned by the producer (including any non-produced non-financial assets), whereas when it refers to rents payable on the use of non-produced non-financial assets, it is referring to non-produced non-financial assets not owned but rented by the producer. It may be obvious to the more informed readers but may be misinterpreted by less familiar readers. Perhaps it could be clarified by moving up the part related to the rents payable or by adding "own" to the "net return to [own] non-financial assets used in production"? This also applies to 7.136 and 7.141.

7.150: The 2025 SNA is unclear whether cultivated biological resources are fixed assets or natural capital [check para. 11.13]. This is a key issue throughout the current draft which also has ramifications for the definition of natural resources (which now exclude cultivated assets which are not natural). There seem different options to resolve this:

- Natural resources are not fixed assets, but they are treated / recorded as if they are.
- Natural resources are fixed assets (and can be subject to depreciation) but they are only classified under natural capital.

7.176, 7.177 and 1.78: Whereas the section title specifies that this would cover those financial services provided in return for explicit charges, these two paragraphs also discuss services for which an implicit fee may be paid. In that regard, the title may need to be adjusted.

7.227-7.230: These paragraphs describe the activity of validation services for crypto assets without a corresponding liability. However, these kinds of services will also be relevant for crypto assets with a corresponding liability (and essentially for all transactions that take place on the Blockchain). For that reason, it may be useful to also mention these here, possibly changing the title to 'crypto validation services' or something similar. The latter may also help linking the text to an output instead of to an asset type.

7.283: Should it also explicitly be explained why depletion is not considered for other types of non-produced non-financial assets (in line with the explanation in 7.265 that depreciation is not calculated for valuables)?

7.285: In the text "The ability for these resources to reproduce and grow naturally means that in certain management and extraction situations, the quantity of resources extracted may be matched by a quantity of resources that are reproduced and, in this situation, there is no overall physical depletion of the environmental asset. Only the amount of extraction that is above the level of growth is recorded as depletion; in the case the amount of extraction is below the level of growth [for instance to allow the resource to regenerate to allow higher future extraction], it is recorded as negative depletion.", it is important to stress that a key condition for recording regeneration should be that there is an expectation of future use. We have tried to word that in-between the brackets.

7.291: Although we believe that all mineral resources are non-renewable, we think it would be better to refer to 'minerals and non-renewable energy resources' instead of 'non-renewable mineral and energy resources'. This applies throughout the whole draft.

- **Lenka Valenta_Germany FSO**

7.24 states that „A purely natural process without any human involvement or direction is not production in an economic sense.“ The unused increment of wood can be regarded as a borderline case here (ESA 2010 3.54).

7.154: We would prefer valuation of electricity produced by households at the price incorporated producers would receive for electricity (excluding charges for transmission or distribution). Feed-in-prices like it is suggested may be very low, while the price a household would have to pay for electricity may be very high. In that case the value of the electricity for the household would not be reflected.

7.283 Definition of depletion refers to depletion of “non-produced natural resource". Below this definition it should be straight away clarified that out of all non-produced natural resources, depletion only applies to: 1. non-renewable mineral and energy resources and 2. uncultivated biological resources yielding once-only products (which are mainly animal resources under a quota regime like fish in open seas).

In general, also the expression “depletion of biological resources” should be avoided, as it is misleading (some biological resources are depreciated and for some biological resource neither depletion nor depreciation applies). Moreover, it will lead to wrong expectations by users.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

9 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Formatting issues: In paragraph 7.91, cases (b) and (c) are mentioned but they are listed with bullets and not with letters.

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Para 7.45: delete “2008” before SNA production boundary.

Para 7.129: “In addition, intellectual property products such as R&D, software products, **including** data and databases, may be produced on own account”. Delete “including”, as data and databases are not part of software. See also para 11.98.

Para 7.136 vs 7.141: the former is about SoC for market output. It refers to a “net” return to non-financial assets used in production. Net of what? The latter is about SoC for non-market output. It refers to “return to non-financial assets used in production” (omitting “net”). Is there a reason for the divergence? It should be noted that para 7.102 refers to “net” return for market output, while para 7.103 states “The same holds for the valuation of production for own final use by non-market producers when these are estimated as the sum of costs”. Does it imply that the return to capital should be net also for non-market output? But again, net of what?

Para: 7.233: “If it is not sold, its value may be estimated on the basis of its production costs **with a mark-up**. However, the size of **any mark-up** must depend on the discounted value of the future receipts expected from using it in production ...”. The language is inconsistent with para 7.141. Production costs include a mark-up, so there is no need to mention it explicitly the first time. The second time, “mark-up” may be replaced with “return to non-financial assets”.

Para 7.234: “The owner of the asset may use it directly to produce copies in subsequent periods.” The text is not clear: does it say that the owner of the asset may use it to produce copies? Then delete “directly”. Or does it mean that he may use it himself and/or to produce copies? In that case, add and/or.

- **SE-Michael Wolf_Sweden Statistics Sweden**

Non-market output

Comments: The same comment as for para 4.292 and 4.293 applies for para. 7.103 and 7.141.

We propose the following wording for para. 7.103 and 7.141:

7.103 The non-market output produced by government units, the central bank and NPISHs that is supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole, is valued by total production costs incurred, similar to the method described in the above paragraph. Including consumption of fixed capital, plus taxes (less subsidies) on production other than taxes or subsidies on products. By convention, no net return to capital is included for non-market production. Similarly, no net return to capital is included in the estimates of production. The same holds for the valuation of production for own final use by non-market producers when these are estimated as the sum of costs.

7.141 The value of the non-market output provided without charge to households is estimated as the sum of costs of production, as follows:

- Intermediate consumption;
- CompensationRemuneration of employees;
- Consumption of fixed Consumption of fixed capital;
- Other taxes (less subsidies) on production;

Some general comments on depreciation and depletion

Comment: We do not think a change of wording from consumption of fixed capital to depreciation can be done without changing the meaning of the concept used in SNA. Such a change would probably also be a step taking the SNA from being a social accounting framework to a microeconomic description of the economy of a society. The use of depreciation as understood in microeconomics should be left to the extended accounts of SNA.

Furthermore, the depletion and degradation of natural resources in general are externalities that do not belong to the standard accounts of the SNA. Accounting for these externalities in the way proposed does not take into account the social cost of these externalities. We agree that there are benefits in additional information on the costs of externalities. But there exist several methods to support such a recording and we prefer a method that is better aligned to the concepts of social accounting.

We propose that the part describing depletion (§§7.283-7.293) is moved to the part in SNA covering extended accounts.

We are of the opinion that growth in the regenerative potential of biological resources is an externality of human economic activity. These kinds of externalities are not paid for, and they are not recorded in the accounts of economic agents. Including these externalities will therefore give the impression that the monetary income is different than what actually is the case. The valuation of externalities should only be included in the extended accounts of the SNA.

<u>Depreciation</u>

Depreciation is a value concept and not primarily related to volumes. The shadow price (value) of capital is in this sense related to the present value of future income and the difference in future income between two dates is accounted as depreciation.

"We define *economic depreciation* to be the decline in asset price (or shadow price) due to aging." (Hultén and Wykoff, The Measurement of Economic Depreciation in *Depreciation, Inflation and the Taxation of Income from Capital*, ed. Charles R. Hultén, p 85)

In economics, depreciation is understood as the difference in real value of an investment between two points in time. Economics use real values since relative prices might change and an increase in relative prices is interpreted as a lower rate of depreciation in real values (utility of benefits) than in nominal values and vice versa in case of a decrease in relative prices of investment goods.

By other words depreciation is the reduction in future real income by using the capital assets. This is also what's captured by the age-price relation referred to in the quotation above. Only when the pattern of depreciation in value corresponds to the pattern of output in volume the ratio of depreciation and volume of output is constant. The difference in relation to consumption of fixed capital (cf. below) is the use of second-hand prices and the overall inflation to derive at real values. Therefore, a constant relation between depreciation and output in volume will only appear by coincidence.

When information on prices on the second-hand market of goods is available these are used to estimate depreciation. The difference between the market prices of a new investment good and a one-year-old good at the same point in time does, in economics, account for the depreciation in nominal terms. By using this kind of information, the conclusion of some research has been, that the depreciation pattern is close to geometric, i.e. the same rate in relation to the net stock value. In national accounts the current replacement cost follows the same development as the price for new investment goods. So, when the change in market prices differs from the change in supply prices of new goods depreciation will differ from consumption of fixed capital.

In national accounts relative price changes does not have an impact on the volume of consumption of fixed capital (CoFC). The volume is set by the costs of production and valued according to the sales price of new investment goods. This value is ideally distributed in proportion to the output in volume produced. This implies that the share of CoFC in relation to output is constant for a given investment good. But, since price changes of the output and the investment good, used to produce the output, might differ, the current price relation need not be constant from period to period.

For the sake of aggregation there is a need to make goods and services comparable by using a common accounting unit. Heterogeneous goods are made comparable in different ways in economics and national accounts. In economics quantities of goods are expressed in the purchasing power of their value. In national accounts quantities are expressed as volumes of a representative good.

For these reasons depreciation should not be used in the SNA standard accounts.

We propose the following wording for para. 7.264:

7.264 Consumption of fixed capitalDepreciation is the decline, during the course of the accounting period, in the current value of the stock of fixed assets, including (cultivated) biological resources yielding repeat products,

owned and used by a producer as a result of physical deterioration, normal obsolescence or normal accidental damage. It also includes the decline of the regenerative potential of the underlying asset of cultivated biological resources yielding once-only products (e.g., forest land in the case of the growth of trees for the production of timber).The term depreciation is often used in place of consumption of fixed capital but it is avoided in the SNA because in commercial accounting the term depreciation is often used in the context of writing off historic costs whereas in the SNA consumption of fixed capital is dependent on the current value of the asset. Using the concept depreciation also gives the impression that the reduction of the capital stock is a matter of revaluation according to the prices of investment goods in the second-hand market. On the contrary, estimation of consumption of fixed capital employs the change in replacement cost of new investment goods as the change in prices of goods in the stock of fixed capital.

Relative efficiency of fixed assets

Comments: The understanding of the efficiency of fixed assets in para. 7.278-7.280 is not aligned to volume measures of GDP. The efficiency of fixed assets should be related to the output produced in relation to which the fixed assets is used and accounted for as a cost of production. This corresponds to the degree of utilisation of the assets.

In social accounting CoFC is ideally distributed in relation to the volume of output the investment good is used to produce. This means that an investment of 1000 monetary units used to produce 10,000 equal units of output over its entire service life should be distributed in 10,000 equal shares as a cost for each unit of output. If the service life is 10 years and the output is 1000 units each year, then CoFC in each period (year) corresponds to 1/10 of the investment and that corresponds to 100 monetary units in base year prices (volume).

The actual volume produced in each period (year) depend among all on the business cycle. This implies that it is not possible to make a correct distribution of CoFC in advance of the scrapping of the investment good. Without information on the pattern of production a simple assumption is that the investment is used to produce the same amount of output in volume year after year. This boils down to a linear reduction in the volume of the investment good recorded in the capital stock. The current recommendation to use a linear pattern is in this sense a reasonable simplification that can be used when empirical data of the pattern is not available.

If we assume a geometric pattern for CoFC this means we assume that the equipment is used to produce gradually less output in volume as it ages. This might be reasonable when we regard a cohort of investment goods but without empirical support it should not replace the linear pattern as the standard.

We propose the follow wording of para 7.278 through 7.282:

Relative degree of utilisation

7.278 The inputs into production obtained from the use of a given fixed asset tend to diminish over time. The rate at which the utilisation declines may vary from one type of asset to another. The simplest case to consider is one where the utilisation of the asset remains constant until the asset is taken out of service and no more output is produced by the asset. Other simple cases include the case where the volume of output produced by the asset declines linearly or exponentially over its life. Other methods employ a hyperbolic rate of asset utilisation with relatively little decline in the initial years but increasingly steeper decline in the use and output produced as time progresses. However, in practice calculations are not undertaken asset by asset individually but for cohorts of assets of similar ages, characteristics and use. Individual assets within the cohort will retire at different moments but the utilisation-retirement profile for the cohort as a whole is typically convex to the origin.

7.279 The utilisation profiles of fixed assets determine the contribution to the volume of output made by using the assets over their service lives. Once the profiles of the utilisation over the service lives of the fixed asset have been determined, it becomes possible to calculate the consumption of fixed capitalconsumption of fixed assets, period by period.

7.280 In general, it is recommended, as a default option, to use linear method for the estimated consumption of fixed assets according to which a constant fraction of the gross capital stock isconsumed; however, other depreciation profiles may be considered more suitable for certain types of assets.

Rates of consumption of fixed capitalconsumption of fixed assets

7.281 Consumption of fixed capitalConsumption of fixed assets corresponds to the reduction in total volume of output produced by utilising the assets in production. This reduction, and the rate at which it takes place over time, must be clearly distinguished from the decline in the efficiency of the capital assets themselves. Although the efficiency of an asset may remain constant from period to period until itis taken out of service, the value of the asset declines over time. It also follows that the rate of consumption of fixed capitalconsumption of fixed assets is not constant. It can be shown in this case that the decline in the value of the assets from period to period is higher earlier in the life of the asset than when the asset is approaching the end of its life. The degree of utilisation is high when the asset is new and becomes lower as the asset gets older and need more maintenance. As a consequence the volume of consumption of fixed assets tends to decrease as the asset gets older.Consumption of fixed This translates into a higher rate in relation to the remaining value, even though the efficiency remain constant to the end.

Values of consumption of fixed capitalconsumption of fixed assets

7.282 Consumption of fixed capitalConsumption of fixed assets should not be estimated in isolation from the derivation of a set of capital stock data. Such data are needed for the balance sheet and, trying to identify consumption of fixed capitalconsumption of fixed assets in isolation from the level of the stock of the asset and its patterns of price and decline in utilisation is likely to be error prone.

- **Jorrit Zwijnenburg_OECD**

7.80: It is stated that “it should also be noted that depreciation and depletion are typically quite large compared with most of the net balancing items”. Whereas this may be true for depreciation, it will not be generally true for depletion. For that reason, we suggest to either delete the full sentence or take out the reference to depletion.

7.128: Reference is made to a rent premium in relation to the question whether or not households renting a dwelling may be allowed to sublease their apartment. However, I am not sure whether that is the issue here. I think that in any case where people rent (or sublet) their dwelling, there may be an issue with double counting in case the full value of the dwelling services have already been taken into account in the owner-occupied housing services. For that reason, I would suggest removing the part relating to the rent premium or to better explain the issue.

7.283: “In monetary terms, it corresponds with the decline in future income, due to extraction, that can be earned from a resource”. This is not fully correct when it is netted with the regeneration. Perhaps it should say “net decline […] due to extraction in access of regeneration”?

7.285: There seems to be a mistake in the sentence “In the case of cultivated biological resources yielding once-only products, such as forest land underlying the growth of trees for timber production, the relevant amounts are recorded as fixed capital formation and depreciation.” This should read as depletion (positive or negative).

7.286-7.287: The first sentence in 7.286 is fine, but we suggest deleting the rest including para. 7.287. The problem is that it suggests that the way to measure depletion is through biophysical models but this is generally not how countries measure this. For instance, in case of timber, they measure net annual increment (i.e., the natural growth) which is based on forest inventories. In the Handbook on Natural Capital, the use of biophysical models is rather seen as an advanced method.

7.292: The text “depending on whether or not the growth of the resources is higher or lower than sustainable yields” is incorrect and should read instead “whether or not the extraction of the resources is higher or lower than (net) natural growth”.

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4 Do you have any other concerns with this chapter?

11 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

It will be very useful for National Accountants if Output and Intermediate Consumption are described for all 21 industries of ISIC revision 4. It makes a clear understanding for beginners of national accounts as well.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes. In paragraph 7.255, it is not clear why all expenses associated with mining exploration activity are assigned to Gross Fixed Capital Formation (GFCF)

In paragraphs 7.47 to 7.56 it would be useful to refer to Eurostat's Tabular Approach to Exhaustiveness which provides guidance on thea measurement of the unobserved economy.

In paragraph 7.136, include practical examples that illustrate how to record transactions related to non-produced non-financial assets, and reference the chapters where the information can be found.

Chapter 7: It is recommended to review the wording of the text, as it seems to follow the rules of Spanish directly in its translation into English, which could generate problems of clarity and fluency in the target language.

Chapter 7: It would be useful to reconsider some examples that seem to be somewhat disconnected from the context to be explained, which could be related to the wording used.

Chapter 7: Although it was initially thought to suggest the inclusion of more elaborate equations, it does not seem to be strictly necessary. The focus of the book is more conceptual than technical, as it is not a manual on TFP calculation or other specific aspects of that nature.

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Section B does not continue to discuss the output of the government and NPISH sectors. It seems important to continue the discussion.

- **Nicola Massarelli_Eurostat**

Para 7.91: "In cases (b) and (c), ...". The referred letters do not appear in the current text, which has bullet points.

- **Amanda Driver_SA_Biodiversity Consultant**

7.2 "… Production is an activity, carried out under the responsibility, control and management of an institutional unit, that uses inputs of labour, capital, and goods and services to produce outputs of goods and services. …"

Would it be useful to include "in some cases ecosystem services" in the list of inputs?

7.264 "Depreciation … also includes the decline of the regenerative potential of the underlying asset of cultivated biological resources yielding once-only products (*e.g., forest land in the case of the growth of trees for the production of timber)*."

Suggest giving an example for agricultural land as well as forest land, to reinforce that these are treated equivalently. (*e.g. agricultural land in the case of crops*)

7.265 refers to *non-produced* biological resources producing once-only products. Should this be *non-cultivated* biological resources for consistency?

7.285 Suggest in last sentence giving an example relating to agricultural land in addition to the example relating to forest land.

7.286 & 7.287 It may be important to mention that models developed to estimate the rate of growth in biological resources and their sustainable yield should be based on the best available science. I'm sure it's beyond the scope of the SNA itself to discuss how and by whom these models should be developed, but just to note that in general NSOs are probably not well-placed to develop them, and if there are cases where an NSO does develop such a model it should be independently reviewed or validated by scientists with relevant expertise.

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>The production boundary</u>

Comments: We think it is time to emphasize the main message in para. 1.61 on the production boundary. Output intended for the market including household sales to market producers is the main bulk of output. This is for different reasons complemented with non-market output and by households providing own-account housing services.

Own-account production by households of agricultural, forestry and fishing products and products in the mining industry should be included if they make significant contribution to the economy. But, if the contribution is marginal and for reasons of measurement difficulties they might be excluded. It should be noted that all input materials used in own account production needs to be recorded as intermediate rather than final consumption.

Analytical information like productivity will also be distorted by the inclusion of output without recording the input of labour and capital.

Own account production of goods are included in so far as they are produced within the same unit that produces goods for the market. The rationale for this is the statistical problems faced in separating inputs and use of labour and capital to each of the output groups, market and own-use respectively.

Unfortunately, in the latest SNA updates the statistical challenges have not been regarded important and the production boundary has been expanded, in principle, to include all own-account goods produced and consumed within the same households.

In reality own-account output has never been implemented to any notable degree which has retained GDP still useful as a guide for economic policy measures. Households have produced heat water and heating of their houses for ages. So far, we have only included the fuel used for providing heat, in household consumption expenditures.

The proposal for para. 7.27, to explicitly mention, to include electricity produced by solar panels and wind turbines and heat by heat pumps and geothermal heat challenges the understanding of SNA. Should fuel wood and wood pellets also be excluded from consumption and instead included as input in heat production? What about labour?

This kind of recording might be analytically interesting and thus included in the extended accounts but still very problematic from a statistical recording perspective and we therefore propose to exclude the explicit mentioning from the description of production in para. 7.27.

We propose the folloing wording of para. 7.27:

7.27 ***The production boundary of the SNA includes the following activities:***

- ***The production of all goods or services that are supplied to units other than their producers, or intended to be so supplied, including the***

production of goods or services used up in the process of producing such goods or services;

- ***The production of all goods, produced on own-account within the same unit producing for the market, that are retained by their producers for their own final consumption or gross capital formation;***
- ***The own-account production of primary products that makes a significant contribution to the economy.***
- ***The own-account production of knowledge-capturing products that are retained by their producers for their own final consumption or gross capital formation but excluding such products produced by households for their own use;***
- ***The own-account production of housing services by owner occupiers; and***
- ***The production of domestic and personal services by employing paid domestic staff.***

- **Lenka Valenta_Germany FSO**

7.15 (definition and explanation of goods) is rather short compared to 7.16 - 7.22 (services), here, for example, electricity could be discussed as a borderline case.

7.39 states: „purchase of the durable should be split between gross fixed capital formation by the enterprise and household final consumption expenditure in proportion to its usage for business and personal purposes“. The newly inserted note could be expanded to include the private use of a car as secondary production of the company that owns it (and as consumption).

7.36 It might help understanding if a sentence were added here to clarify that the services mentioned can also be performed by external service providers who are not employees of the household, and that the value of the output then includes intermediate consumption of this external service provider. Nowadays, many of the services mentioned in households are bought on the market rather than actually being performed by people employed in the household.

Chapter 8: Earned income accounts

2 Comments

- **derya baş sonbul Türkiye Turkish Statistical Institute/National Accounts**

8.4 paragraph.The resources revenues, listed on the right-hand side of the generation of earned income account, consist of only
a single item, value added, the balancing item carried forward from the production account.

ı suggest that In paragraph 8.4, it seems like only value added is being recorded. However, on the right-hand side, the "**other subsidies on production**" (D.29) account is also included. This statement should be added as well.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

In **paragraphs 8.19b (and c)**there seems an error created in the new text (the underlined part) on operating surplus for S.13: *certain amount of operating surplus resulting from the production of non-market services and own account capital formation (see the annex to chapter 4 for more information on the valuation of the relevant output), as well as operating surplus from units within general government undertaking market production*. The production of non-market services and own account capital formation will not lead to an operating surplus as the non-market production (P.132) is calculated as a residual. However, if there is a market KAU (establishment) in an S.13 IU there would be a B.2 calculated at KAU level. This should be reversed, chapter 4 annex does not imply the possibility to calculate B.2 on non-market output. From which recommendation does this change stem? Also, “units” should be replaced by entities. A government controlled market producer that meets definition of an institutional unit (or quasi-corporation) is a public corporation and not part of S.13.

Paragraphs 8.57 and following: The change for social insurance schemes is noted. However, it is not clear why “employment related” is eliminated from the paragraphs discussing employers’ social contributions? Surely, if D.12 is present, the scheme to which it is paid is a single or multi employer scheme rather than being independent of the employment.

8.75 references to specific version of GFSM, which is under update. This should be avoided. Furthermore, the treatment of taxes is not equal in SNA and in GFSM and Revenue Statistics. E.g. with GFSM due to consolidation. The cross-references could usefully remain in the SNA but should rather be put in Annex than form part of the main text.

8.82 and following:

The GN WS.14 seems not completely reflected and the following should be established: Payments for licences that are not part of a regulatory function should always be recorded as taxes, it was not part of the GN and recommendations to change that principle. The paragraph could start with this statement.

In **paragraphs 8.83** there is unclear wording in distinguishing P.131 from taxation. It used to be 'clearly out of all proportion to the costs of providing' now it reads: "*In this case it might be appropriate to record the payment as a payment of service rather than a tax, but only if the service element of the payment is considered sufficiently material. To recap, the default recording for payments under government-imposed mandatory regulatory schemes should be as taxes, unless a significant service element can be identified leading to recording as a payment of service.*". What is 'sufficiently material? What is significant (not meant in a statistical way). There should only be exceptions whenever the service element is at least equal in value (not in cost) to the payment made.

8.84 Consolidated list of recommendations references discussions in 2012 and 2013, with no documents sent for global consultation and with question in the recommendation: "Further discussions at the Eurostat FAWG?"? Answer is yes, as indicated in our comments on the recommendations.

We wrote: "We do not agree with the conclusions that stability contributions can be a payment for services for an insurance-like event. Rather, the events for which deposit protection schemes are set up and collect contribution are of the uninsurable type. Procedurally, this guidance was not put for global consultation and not even published in SNA news & notes. By default, in line with GN WS.14, the payments should be recorded as taxes in case they are not refundable (and otherwise as a liability rather than revenue). Annex 1 on X.11 actually queries whether the issue was further discussed in Eurostat's FAWG and furthermore does not present a firm conclusion. Actually, the issue was indeed further discussed in Eurostat's EDPS WG (the successor of the FAWG) and it was concluded that a/ the payments cannot be seen as insurance (anyway even in this case, the recording should supposedly be rather different to the one proposed by the paragraph

117), b/ the payments are taxes if non-refundable. More details can be found in Eurostat's Manual on Government Deficit and Debt, chapter 1.5, particularly paragraph 27. The current recommendation present procedural issues and has undesirable effect on government net lending, the delineation of general government and is in contradiction with paragraph 150."

We do not agree with the inclusion in the 2025 SNA, one of the treatments recommended in 8.84 (insurance) was considered unsuitable by the relevant European expert group. For refundable contributions, in contrast, it was considered inappropriate to record government revenue.

Paragraph 8.89 (and **9.60**) on tax amnesties "*However, in accordance with the accrual principle, if a tax amnesty establishes tax obligations for previously undisclosed transactions, events or assets, then the tax revenue should be recorded when the tax obligation is established and not to a period prior to the tax amnesty."* To be an obligation is not enough. It should be collectable. As mentioned before Eurostat MGDD takes a different view on the appropriate time of recording of revenue from tax amnesties.

Paragraph 8.112: on other subsidies on production, as the COVID-19 furlough schemes illustrate D.39 this was essentially a subsidy for not producing. Also outside COVID-19 context such subsidies exist (and might grow in importance), for example subsidies for farmers to leave part of their land idle. This could be added as clarification.

Paragraph 8.112: on other subsidies on production, as the COVID-19 furlough schemes illustrate D.39 this was essentially a subsidy for not producing. Also outside COVID-19 context such subsidies exist (and might grow in importance), for example subsidies for farmers to leave part of their land idle. This could be added as clarification.

The ISWGNA outcomes in relation to the recording of furlough schemes https://www.imf.org/en/Publications/SPROLLs/covid19-special-notes#stats (en-special-series-on-covid-19-government-support-to-businesses-and-households.pdf) were according to the list of recommendations intended to be reflected in the SNA. However, only one of the options considered appropriate is seems reflected in the draft SNA – D.39 9at least when using a text search of "COVID", while current transfers seem not reflected. The consolidated list of recommendations reads: "Recommendations for recording government support as either other subsidies on production (objective is maintenance of business), current transfers (objective is income support of households)." Please reflect the guidance with all the options in the draft. It would be inappropriate if only one option were presented, given that not one option could be settled on in discussion with experts. At least in Europe, there were diverse views, but also diverse set-ups of the schemes, making it possibly warranted to treat them either as supporting primarily businesses or supporting primarily households in different ways in different countries.

Moreover, this guidance is better placed in chapter 30. Like this, it could lead to confusion as compilers could only stumble on one of the options and possible use an inappropriate one for their case.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Nicola Massarelli_Eurostat**

We do not see any text related to the recommendation to record **emission permits** as a financial asset with taxes on production recorded at surrender, at issuance prices, which according to the Recommendation impact file should be included in section C3.

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

10 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

Paragraph 8.143 - In the session of reinvested earnings on foreign direct investment, the material should have a clear different definition between reinvested earnings and retained earnings. The explanation in the beginning of this paragraph should be focused on the definition of reinvested earnings instead of retained earnings.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Paras 8.2 and 8.8: “renting non-produced non-financial assets, **including** natural resources…”. Given that in the new asset classification natural resources are separated from other non-produced assets, this sentence may be misleading. A clearer formulation would be: “renting natural resources or other non-produced non-financial assets”.

Para 8.115 could possibly mention the inclusion of observable phenomena given it is a new and quite different generator of rent.

Para 8.172: under new heading “Rent on other non-produced non-financial assets” – does however suggest that rent is paid to households to permit the monitoring of their internet behaviour, thus creating a produced asset in the form of personal data. Given this is a simplification and the point is discussed in more detail in para 22.28, could this be referenced, or the text in 8.172 brought in line?

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

8.115: Reference is made to the fact that “rent is shown together with an explicit deduction for any depletion of natural resources borne by the legal owner”, but it is not entirely clear what this means. In this regard, it would be essential that rent and depletion are recorded in separate lines. In that regard, it may be clarified that “in addition to rent payments, the depletion borne by the legal owner of the resource will also be recorded separately”.

8.172: The last sentence refers to households giving explicit consent to have their behaviour monitored, but we think many of that would still only go into a satellite account, correct? Only in case of explicit payments, it would go in? In that regard, with a lot of apps you agree with the terms and therewith explicitly giving consent to be monitored (although a lot of people do not explicitly read the terms). This would remain outside the sequence of accounts, right? In that case, it may be useful to include some further explanation on this.

- **Lenka Valenta_Germany FSO**

  8.115 says: *“…As the resource may suffer depletion (or regeneration for renewable resources), rent is shown with an explicit deduction for any depletion of natural resources borne by the legal owner”*.

  Do we understand well that “depletion born by legal owner” (mostly government) shown in the Allocation of earned income account for extractor and legal owner, concerns only 1. non-renewable mineral and energy resources and 2. uncultivated biological resources yielding once-only products (which are animal resources under quota)? Please confirm.

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

12 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

E. Property incomes

Investment income disbursements - “Investment income disbursements” in the Property income should be replaced to the updated heading new classification as “Other investment income”.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

There is an inconsistency between BPM 8.16 and SNA 8.138 regarding the distribution of dividends: SNA 8.138 states that “all dividends payable to direct investors are treated as earned income.” BPM 8.16 only considers distributions out of current earnings and “accumulated retained earnings from previous periods … treated as dividends.”

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **María Marcela Harriague_INDEC Argentina**

No

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

8.159: “The imputed investment income on this claim is equal to the shortfall (or excess) in property income payable by the pension fund (i.e., the investment income payable on defined benefit pension entitlements (see paragraph 8.158) minus the investment income receivable on the assets accumulated by the pension fund.” The reference to “investment income” in the last part of the sentence should be changed to “property income”.

8.171: “Any payments made by the user/extractor of a non-produced natural resource to the owner of the natural resource, which are linked to the use/extraction of that resource, in particular to the quantity and/or value of that resource, should be recorded as rent. These would include, for example, royalties, sur-taxes, and permits. However, payments that are paid by the user/extractor on the same basis as other corporations who are not users/extractors of natural resources (e.g., standard rate corporation taxes, dividends, payments for services) should not be recorded as rent.” The first part seems to be at odds with the recommendations in the SEEA CF, which states that any taxes linked to the use/extraction of a resource should be treated as ‘specific taxes on products and/or production’ (and/or income).

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>Recording of claims of pension funds on pension manager</u>

Comments: The proposed recording of a surplus in pension fund as a negative claim is hard to understand. Our understanding is that every financial asset has a liability counterpart (with few exceptions) and regarding the name we use the same on both sides in the accounts. Pension entitlements are named as assets but also appear as liabilities and we think the same should be the case for claims of pension fund /…/ named as an asset seemingly only for one part of the relation. Negative values should in normal cases not appear in the balance sheet. Negative values for financial transaction are on the other hand a reduction in the asset/liability depending on which side of the accounts it appears (debit/credit).

We propose the following wording of para. 8.159:

Imputed investment income attributable to the surplus/shortfall in defined benefit pension funds

8.159 In the case where a pension sponsor (for example, an employer) is responsible for meeting the liabilities of a defined benefit pension scheme in case of any shortfall, this sponsor is known as a “pension manager”. The shortfall should be recorded as a claim (in the debit side of the accounts) of the pension fund on the pension manager (credit), in case of a surplus on the credit side of the pension manager. The imputed investment income on this claim is equal to the shortfall (or excess) in property income payable by the pension fund (i.e., the investment income payable on defined benefit pension entitlements (see paragraph 8.158) minus the investment income receivable on the assets accumulated by the pension fund. The income flow is recorded as a (negative) payable and a (negative) receivable between the pension manager and the pension fund.

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4 Do you have any other concerns with this chapter?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 8. It is suggested that the classification of certain government revenues be reconsidered, assessing whether they should be treated as services rather than taxes, depending on their nature. This could lead to a more accurate and representative categorization of government revenues.

Chapter 8. It is recommended that the guidelines in Annex A of the GFSM 2014 be used to properly define the nature of taxes. This annex provides essential criteria to be taken into account when classifying taxes, which will improve the accuracy and consistency of the classification.

Chapter 8. It is suggested that natural capital be included within gross capital formation, which implies the integration of taxes, subsidies, and production related to environmental sustainability in the production, income generation, and primary income accounts. It is also recommended that the depletion of natural resources be addressed, since this affects the balance of each account.

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

We suggest to assess whether sections **C. Taxes on production and on imports and D. Subsidies** should be considered in chapter 7, under point **C. Basic, producers' and purchasers' prices**, especially in the case of taxes and subsidies on products. Since if the production account is calculated at basic prices they should be considered in that account, as mentioned in paragraph 8.79. For those countries that do not calculate basic prices, reference can be made to the paragraphs dealing with these taxes.

- **Nicola Massarelli_Eurostat**

Coverage of rent

The definition of Rent given in the Glossary and in 8.115 says:

"Rent – Income receivable by the owner of a non-produced non-financial assets (the lessor or landlord) for putting the assets at the disposal of another and in institutional unit (a lessee or tenant) for use in production."

    - Although this wording is consistent with AI.2 and the Consolidated list, is there scope for confusion? Should <u>non-produced natural resources</u> be mentioned explicitly? The reader might assume the definition (coverage) applies only to AN.2 in the new classification (Table 11.4) ie non-produced non-financial assets (excluding natural capital) and not any non-produced items in AN.3 Natural capital.

Conversely, this is dealt with in the textual changes made throughout Chapter 8 from: “Rent is the income receivable by the owner of a natural resource …” to “Rent is the income receivable by the owner of a non-produced natural resource or another non-produced non-financial asset…”

- But these changes have introduced a further risk of confusion by using the word “another”. The new text isn’t clear whether rent applies to <u>all</u> or only a subset of non-produced non-financial resources. The wording in AI.2 and the Glossary seem to suggest more firmly that the income from all non-produced non-financial assets is treated as rent. Could the new text in Chapter 8 be redrafted as: “Rent is the income receivable by the owners of non-produced non-financial assets including non-produced natural resources …”
- For full clarity, it might be helpful to reference the classification system (Table 11.4, Table 1 of the Consolidated list). It could be explicitly stated, for example in Chapter 8 “Income receivable by the owner (the lessor or landlord) of non-produced non-financial assets including non-produced natural resources, ie AN.21 and the non-produced elements of AN.3.”

AN.2 Non-produced non-financial assets (excluding natural capital)

AN.21 Contracts, leases and licenses

AN.211 Marketable operating leases

AN.212 Permissions to use natural resources

AN.213 Permits to undertake specific activities

AN.214 Entitlements to future goods and services on an exclusive basis

AN.22 Crypto-assets without a corresponding liability [*Irrelevant?]*

AN.23 Goodwill [*Irrelevant?]*

AN.3 Natural capital

AN.31 Natural resources

AN.311 Land

AN.312 Mineral and energy resources

AN.3121 Non-renewable mineral and energy resources

AN.31211 Oil resources

AN.31212 Natural gas resources

AN.31213 Other mineral and energy resources

AN.3122 Renewable energy resources

AN.31221 Wind energy resources

AN.31222 Solar energy resources

AN.31223 Water energy resources

AN.31224 Geothermal energy resources

AN.31224 Other renewable energy resources

AN.313 Biological resources

AN.3131 Biological resources yielding repeat products *[Produced]*

AN.31311 Animal resources yielding repeat products *[Produced]*

AN.31312 Tree, crop and plant resources yielding repeat products [*Produced*]

AN.3132 Biological resources yielding once-only products

AN.31321 Migrating biological resources yielding once-only products

AN.31322 Non-migrating biological resources yielding once-only products [*Produced*]

AN.31323 Work-in-progress on non-migrating biological resources. [*Produced*]

AN.314 Water resources

AN.315 Radio spectra and other natural resources

AN.3151 Radio spectra

AN.3152 Other

Chapter 8 section 5 sets out the coverage of rent under headings of Rent distinguished from rentals (8.163), Rent (8.164), Rent on land (8.165-168), Rent on mineral and energy resources (8.169-170) and Rent on other non-produced non-financial assets (8.172).

- There is no explicit discussion here of Rent on natural resources and no reference to where this is discussed. Natural resources are referred to at the end of 8.164 but this seems too brief and vague: "... Rent on non-produced natural resources other than land and mineral and energy resources follows the pattern laid out by the first two instances.”

  - Also, Rent on other non-produced non-financial assets (8.172) is a new paragraph, but only mentions marketing assets and the collection of personal data from households. While rent may be irrelevant in the context of Crypto-assets without corresponding liability, and Goodwill, is it not relevant for some Contracts, leases and licenses?

- **Jorrit Zwijnenburg_OECD**

8.115: A lot of the text in this paragraph could better be moved to Section 5. In addition, it would be important (and also logical) to introduce and define resource rent in Section 5, as the surplus value accruing to the extractor of an asset after all costs and normal returns have been taken into account (and refer to the annex of Chapter 4 (paragraph 4.136) where reference is made to resource rent and/or Chapter 11).

8.121: This may need to be expanded with crypto lending.

Chapter 9: Transfer income accounts

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

yes

- **Mark de Haan Netherlands**

par 9.79: It is important to adhere very strictly to the wording of Guidance Note F.12 Covering Hybrid Insurance and Pension Products, like the draft of BPM7. This is also relevant for paragraph 24.100'.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

10 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

Paragraph 9.45 - *"In the SNA, final consumption expenditure is incurred only by general government, NPISHs, the central bank*
and households. All consumption expenditure by households is incurred on their own behalf. Consumption
expenditure by general government, on the other hand, is either for the benefit of the community at large
(collective consumption) or for the benefit of individual households. Consumption expenditure by the central
bank is considered to be produced for the benefit of the community at large, while consumption expenditure
by NPISHs is always treated as the provision of services for the benefit of individual households. This
distinction between collective and individual consumption expenditure is of considerable importance in the
SNA and is discussed in detail in chapter 910. Consumption expenditures by general government and NPISHs
on behalf of households (their individual consumption expenditures) are undertaken for the purpose of making
social transfers in kind. They cover the non-market output of both general government and NPISHs delivered
to households free, or at prices that are not economically significant, as well as goods and services bought
from market producers and provided to households free or at prices that are not economically significant."

The first paragraph of social transfers in kind explains the coverage of sectors related to social transfers in kind, which comprises of government, NPISHs and the central bank. After that, the central bank disappears in this session because the transactions of the central bank can produce the benefit for the large in the community not within the individual households. This content should provide more explanation for recording the central bank transactions to another account as well.

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

Paragraph 12.93 - *"Ownership of equity in legal entities is usually evidenced by shares, stocks, depository receipts,*
participations, or similar documents. They may also take the form of equity crypto assets, which are similar
to standard equity albeit with a novel technology for being created, allocated, transferred and managed." The form of transactions related to equity crypto assets is recorded to the session of equity and investment fund shares. This is a new updated information in this manual and the manual does not provide the definition and practical example of crypto assets in the form of equity.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

9.39-Is it possible to further separate and clarify with clear examples the definition of capital transfers in this SNA? Because the separation of capital and current transfers often leads to great difficulties in practice.

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

9.24: It is stated that disposable income of households includes the excess of SNA interest over bank interest on deposits and excess of bank interest over SNA interest on loans, but it may need to be explained that this does not apply to mortgage loans (as the difference will be recorded as intermediate consumption of FISIM in the production of owner-occupied housing services) and for business loans and deposits (for which the FISIM will be recorded as intermediate consumption in the production activities of the household).

9.137: The definition of personal remittances related to remuneration of employees seems broader than in the 2008 SNA, as it now only refers to "transport and travel expenditure" whereas it referred to any "expenditure abroad by the employees". Is this intended? The sentence also refers to "plus capital transfers received from households", but it may need to be specified that this would be from households abroad. Moreover, it seems redundant as the first part of the sentence already refers to "personal transfers from abroad" which would also cover any capital transfers from households abroad, correct? We think this may have been the main reason why this part wasn't included in the 2008 SNA.

- **Marshall Reinsdorf_ISWGNA Editorial Team**

9.43 doesn't finish the thought on what happens if both transactions are completed in the same time period. Was "and," supposed to be deleted here?

9.44 ignores the fact that enterprise A could have transactions in inventories and its explanation of the imputed cash transfer from enterprise A to the NPISH and imputed purchase of the medicine from enterprise B by the NPISH is not clear.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

no

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **María Marcela Harriague_INDEC Argentina**

No

Response made on behalf of the Technical Directorate of INDEC.

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

Para 9.10: "[…] Capital transfers are unrequited transfers where either the party making the transfer realizes the funds involved by disposing of an asset **(other than cash or inventories)**, relinquishing a financial claim or the party receiving the transfer is obliged to acquire an asset **(other than cash)** or both conditions are met." Why is cash excluded from capital transfers here but is included in para 11.24? May some transfers of cash be considered as capital transfers? And why transfers of inventories would not be capital transfers?

Para 9.122: "… The way in which the service charges are calculated is explained in paragraphs 7.185 to 7.191." Is this reference correct? That part of chapter 7 is not about non-life insurance premiums service charges, and gives no indication on how to calculate service charges.

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>Social insurance schemes for self-employed</u>

The income of self-employed is mixed income. Mixed income includes payments made to government and insurance corporations for taking part in social insurance schemes. Payments to compulsory schemes out of mixed income is recorded as social contribution payments but voluntary payments are not. This is distinct from employees who are receiving employer's social contribution as part of negotiated remuneration.

The contributions made by self-employed are recorded as households' actual social contribution. These only cover compulsory payments. The payments by self-employed on a voluntary basis are recorded in the same way as voluntary contributions made by employees out of wages and salaries.

It is not clear how a policy can be taken out by self-employed without being in their names. The group the risks are pooled together with is not of interest when it comes to recording in SNA, it is who is the sponsor of the policy taken out that matters. Therefore, we think the proposed change regarding social insurance schemes except for social security schemes is not correct from a social accounting perspective.

How the scheme is organised and for whom is not an issue. The important thing is the relation between the sponsor/manager and the beneficiary. In cases where it is hard to make the correct distinction the most criterion applies, as always.

We propose the following recording of para. 9.6 and 9.7 and consequently for 9.67 and 9.79:

9.6 Social insurance schemes are schemes in which social contributions are paid by employees, self-employed or others, or by employers on behalf of their employees, in order to secure entitlement to social insurance benefits, in the current or subsequent periods, for the employees, self-employed or other contributors, their dependants or survivors. The social benefits payable by social insurance schemes are of two kinds, pensions and other benefits such as medical, education, housing or unemployment benefits. Pensions are always paid in cash; non-pension benefits may be payable in cash or in kind.

9.7 Two main types of social insurance schemes may be distinguished:

1. The first consists of social security schemes covering the entire community, or large sections of the community including compulsory payments by self-employed, that are imposed, controlled and financed by government units. Pensions payable under these schemes may or may not be related to levels of salary of the beneficiary or history of employment. Non- pension benefits are less frequently linked to salary levels.
2. The second type consists of other employment-related employment-relatedsocial insurance schemes. These schemes derive from an employer-employee relationship in the provision of pension entitlement that is part of the conditions of employment and where responsibility for the provision of benefits does not devolve to general government under social security provisions.

9.67 A social insurance scheme is an insurance scheme where the following two conditions are satisfied:

1. the benefits received are conditional on participation in the scheme and constitute social benefits as this term is used in the SNA; and
2. at least one of the three conditions following is met:
    - Participation in the scheme is obligatory either by law or under the terms and conditions of employment of an employee, or group of employees;
    - The scheme is a collective one operated for the benefit of a designated group of workers, whether employed or non-employed, participation being restricted to members of that group;
    - An employer makes a contribution (actual or imputed) to the scheme on behalf of an employee, whether or not the employee also makes a contribution.

9.79 Schemes providing social benefits may also be established for groups of self-employed persons. When organized by government, as part of a broader arrangement, such schemes would typically qualify as social security.

Marshall Reinsdorf_ISWGNA Editorial Team

In paragraph 9.43, this sentence seems to be missing some words at the end: "Both transactions do not involve any imply two entries in the financial account and, if both transactions are completed in the same accounting period," Perhaps the words that are shown as deleted were intended to remain in the text.

In paragraph 9.44, the new language is unclear. The first sentence should identify who receives the transfer. The second sentence (which is garbled) should mention that the NPISH uses the transfer for an imputed purchase of the medicine from enterprise B. Also, the first few sentences of this paragraph are not correct in dismissing the possibility of recording the acquisition of the medicine by enterprise A as an increase in inventories.

In paragraph 9.87, "claims of the pension fund to the pension manager" should be "claims of the pension fund on the pension manager"

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4 Do you have any other concerns with this chapter?

8 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

1. The distinction between current and capital

Paragraph 9.38 - Capital transfers should have more practical examples. Is it possible for one type of goods or service can be both capital and current transfers?

Table 9.6: The income transfers other than social transfers in kind account - with details of current transfers - expenditures and Table 9.6 (cont): The income transfers other than social transfers in kind account - with details of current transfers - revenues - The indentation should be applied for the hierarchy level of current transfers. This means that the sub-items under current transfers should not have the same level of the heading.

H. Social transfers in kind

Paragraph 9.149 - 9.151 - Social transfers in kind is quite specific topic and has a few practical examples because government activities mostly focus on the social transfers in cash for injection the subsidies into the domestic economy easily. Could this be possible to give more examples for social transfers in kind in this manual?

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

Paragraphs 9.59 to 9.61 are identical to paragraphs 8.88 to 8.90. We suggest replacing the former with a single paragraph referring to paragraphs 8.88-8.90.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Paragraph 9.44 the example was not clear before and is not clear now. Why is it modified? Could it be dropped?

Paragraph 9.45 a new sentence: "*Consumption expenditure by the central bank is considered to be produced for the benefit of the community at large, while consumption expenditure by NPISHs is always treated as the provision of services for the benefit of individual households.*" In other places, also in new sentences, it is written that NPISH can have collective consumption expenditure. This change does not seem to stem from the consolidated list of recommendations, so the existing ambiguity would better be retained.

Paragraph 9.55 The GN WS.14 seems not completely reflected and the following should be established: Payments for licences that are not part of a regulatory function should always be recorded as taxes, it was not part of the GN and recommendations to change that principle. The paragraph could start with this statement.

In **paragraphs 9.56** there is unclear wording in distinguishing P.131 from taxation. It used to be 'clearly out of all proportion to the costs of providing' now it reads: "*In this case it might be appropriate to record the payment as a payment of service rather than a tax, but only if the service element of the payment is considered sufficiently material. To recap, the default recording for payments under government-imposed mandatory regulatory schemes should be as taxes, unless a significant service element can be identified leading to recording as a payment of service.*". What is 'sufficiently material? What is significant (not meant in a statistical way). There should only be exceptions whenever the service element is at least equal in value (not in cost) to the payment made.

(please refer also to our comments on tax amnesties in chapter 8.)

Paragraphs on taxes reference to references to specific version of GFSM, which is under update. This should be avoided. Furthermore, the treatment of taxes is not equal in SNA and in GFSM and Revenue Statistics. E.g. with GFSM due to consolidation. The cross-references could usefully remain in the SNA but should rather be put in Annex than form part of the main text.

Paragraph 9.60 (and **8.89**) on tax amnesties "*However, in accordance with the accrual principle, if a tax amnesty establishes tax obligations for previously undisclosed transactions, events or assets, then the tax revenue should be recorded when the tax obligation is established and not to a period prior to the tax amnesty."* To be an obligation is not enough. It should be collectable. That is why TAC is the preferred method. As mentioned before Eurostat MGDD takes a different view on the appropriate time of recording of revenue from tax amnesties.

9.66c: TV and radio licences should be included in the list of licences to be recorded as taxes.

Paragraph 9.79/24.100 reads: "*Schemes providing social benefits may also be established for groups of self-employed persons. When organized by government, as part of a broader arrangement, such schemes would typically qualify as social insurance. If government is not directly involved, the default option is to not treat such types of schemes as part of social insurance, unless the schemes are collective arrangements which provide policies, for certain industries or professions, with a strong resemblance to similar arrangements organized by employers or government. These schemes may, or may not, be encouraged by government; in the former case, this would strengthen the case for a classification as social insurance. In addition, to qualify as social insurance, generally separate institutional units should be established, which are subject to regulation or supervision in line with or similar to other social insurance schemes. In the case of pension-related schemes, an additional criterion for the qualification as social insurance is that accumulated contributions are set aside for retirement income*". First, this "*accumulated contributions are set aside for retirement income*" feels like a step backwards from one of the big innovations introduced in the 2008 SNA that the (level of) funding was no longer a criterium for recognising a pension entitlement in a defined benefit scheme (except for government employees where there is flexibility in the recording). One problem with 'funded' is that money is fungible (see also **paragraph 24.137**). Second, it is not clear what 'organized by government' and 'government involvement' mean. Third, even if there is a separate institutional unit in SNA paragraph 24.91 called 'employer-independent scheme' (similar to a multi-employer scheme) it is not clear what flows to record for self-employed (and unemployed we recon for paragraph 9.67) as normally there is a D.12. Does this imply D.613?

Paragraph 9.141 is hard to understand "*Some fines and penalties may be established in contracts of mergers and acquisitions where the contract may include contingent fines or penalties based on, for example, profitability, or a pending lawsuit, and resulting in a payment between the buyer and seller after the initial transaction. In these cases, the fines and penalties would be interpreted as an adjustment or update of the exchange value of the* *acquired enterprise, and treated as a direct investment transaction (or a portfolio investment transaction if the buyer has less than 10 percent of the voting power), instead of a current transfer*". The introduction of an ex-post update of the exchange value of the acquired enterprise seems rather novel. Also, market prices include expectations.

9.148: we continue to disagree with including this paragraph, the recording of D.7 did not receive a major at global consultation, in ESS expert groups it received no support. We see no merit in departing from principles on this issue.

Chapter 10: Use of income accounts

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **María Marcela Harriague_INDEC Argentina**

Yes

Response made on behalf of the Technical Directorate of INDEC.

- **Jorrit Zwijnenburg_OECD**

10.75: The added sentence “The transfer of the leased asset at the end of the lease period should be recorded as the building up of a financial claim, which is extinguished at the time of the transfer of the leased product” doesn’t read well. It seems that the first part is incorrect?

10.108: I am not sure about the sentence “Although the central bank delivers their services to the population collectively, the costs of doing so are shown as final consumption expenditure by the central bank.” It seems to refer to a specific contradiction (between delivering services to the population collectively and recording this as final consumption expenditure by the central bank) that in my view does not really exist.

- **Lenka Valenta_Germany FSO**

10.72 Why were the examples deleted for licences and fees as a purchase of a service (HFCE) such as passports? Or are now all mandatory payments from households to government taxes? Should all court fees be current taxes, e.g. court fees for buying houses? Court fees for a divorce? For civil proceedings? Please clarify. If these have changed, please include references (paras) to the new treatments.

- **Marshall Reinsdorf_ISWGNA Editorial Team**

The first sentence of 10.11 should say "... the central bank, which produces and consumes collective services, ..."

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **María Marcela Harriague_INDEC Argentina**

No

Response made on behalf of the Technical Directorate of INDEC.

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4 Do you have any other concerns with this chapter?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 10. It is suggested that fungible tokens, such as the GCFH, be recorded and considered in financial accounts. These tokens represent interchangeable assets and their inclusion can provide a more complete view of financial assets and their impact on public accounting.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

Paragraph 10.4 mentions that 'collective services are the "public goods" of economic theory'; however, final government consumption may include goods or services that do not meet the characteristics of public goods, but respond to other market failures (positive externalities, information asymmetries, etc.) or equity reasons. Therefore, we suggest to remove this mention.

We suggest including in this chapter (or in chapter 30) a table linking government final consumption expenditure to fiscal statistics, specifically to the economic classification of expenditure, so that it is clear which items are included in which account.

- **Nicola Massarelli_Eurostat**

Para 10.55: Consider adding a reference to production and consumption of electricity by households in the list at the end of the paragraph.

- **Lenka Valenta_Germany FSO**

10.59 It's unclear why such a special case "Non-fungible tokens" is placed so prominently and extensively in the introduction chapter? The share of these kind of expenditures on HFCE is insignificant. There is more important HFCE such as expenditure on durable goods (cars) and for services (insurances) that is not mentioned explicitly in the introduction. The reference in 10.60 "The treatment of expenditure in some specific situations or on certain specific types of goods and services is outlined in the following sections." should be enough.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Paragraph 10.16 partly on social transfers in kind to non-residents. "Figures involved are likely to be very small" à "very" is changed to "relatively". It is unfortunate that the matter from the 2008 SNA research agenda has not been addressed even while the problem has increased from being "very small" to "relatively small". In Europe, it is arguable, whether these transfers are "relatively small", due to cross-border workers, possibility to seek health treatment in other countries, tourism, refugees when not treated as resident. When provided by government units, such social transfers in kind to non-residents inflate total expenditure and the outlays in the relevant COFOG groups. It would be better to work towards solving the issue, for example having more inclusive concept of S.13 P.3 for the purpose of COFOG and total expenditure, similar to what is done when compiling Coicop. Then only the P.31 related to residents would be assigned to S.14 P.31, while the part related to non-residents would be exports (in the same value as the "fee" needed to be imputed today in order to avoid a positive amount of P.31).

10.72: please refer to comments in chapter 8&9.

Paragraph 10.102: "*However, the COFOG classification is periodically reviewed and the precise mapping of the COFOG classification to collective and individual services may also be updated during these revisions.*" We think this insertion should be dropped. The P.3 split using COFOG is an integrated part of the NA and should not be changed outside a "comprehensive update" of the NA (see Box 21.2).

In **paragraph 10.113** provides an example of P.32 of NPISH: *a privately funded non-profit institution may undertake medical research and make its results freely available*. First, as R&D is capitalised (sum of costs, P.12/P.51g) and P.51c is to be excluded to avoid a perpetual loop, it is not clear how this should impact P.3. Or is it proposed to exclude freely available R&D from the asset definition (which we would fully support as there are no enforceable property rights). Second, a better example might be FISIM. This is P.32 of S.13

so might logically be P.32 of S.15. The example of P.32 for NPISH however contradicts other chapters, where an opposite move is observed (e.g. new paragraph 9.45).

Paragraph 10.126 reads: *Actual final consumption of the central bank is measured by the value of the collective consumption services provided to the community, or large sections of the community, by the central bank*. This is a rather circular statement. It would be better to relate it to sum of cost minus P.11/P12/P.131.

Chapter 11: Capital account

4 Comments

- **Eli Fenichel_US Yale Univ**

The separation of natural capital seems potentially misguided. It is unclear if this is wise or not. Natural capital can be produced or non-produced and the line between can be blurred. On the other, hand removing natural capital from produced and non-produced capital runs the risk of ignoring all together.

11.5 – concerned about the word entitled in connection with economic ownership. Entitle is legal concept not an economic one. The sentence should simple read, "By contrast, the economic owner of items such as goods and services, natural resources, financial assets and liabilities is the institutional unit realizing benefits associated with the use of the entity in question in the course of an economic activity by virtue of accepting the associated risks."

This provides a more positive and less normative stance.

11.8 – This is an important point, but exploit should be changed to use. For example, when a country provides a hotel concession in a national park, the hotel benefits directly from the surrounding national park, though this might be viewed as exploiting the park. It certainly is not harvesting.

11.11c -- ...human involvement, such as forest management plans,... I think an example would be helpful.

11.13 – might some of the examples, e.g., IP actually be human capital?

11.15 – some disambiguity is need. Would goal or gems in the ground be natural capital or produced valuables? I would think natural capital, even if proven reserves. Presumable some sort of finishing product is required here, like reshaping gold into bars?

11.16 – how are crypto-assets non-produced? They are very much produced though energy and computation. This crypto assets should produced assets. They are far more like works of fine art. That is the whole NFT thing.

11.17 – contracts and leases and licenses require a lot of production from lawyers. These don't seem as if they are usefully called non-produced assets.

11.22 – lacks sufficient institutional detail. For example, deep sea minerals under the high seas have largely been allocated to countries, high seas tuna and whales are governed and allocated by international agreement, local air quality is managed by governments on behalf people. Something should be added to the effect that many institutional arrangements exist that satisfy the ownership condition.

11.29 – this is confusing because natural capital was removed from the produced capital category and natural capital was not divided into produced and non-produced assets. This can probably just say including natural capital.

11.31 – again "non-produced" in front of the natural capital is confusing or inconsistent.

11.86 – it is worth pointing out that the value of such moments often capitalize into other structures, much like some forms of natural capital.

11.88 – is confusing because natural assets have been excluded and land is a natural asset. This speaks to the issue of marginalizing off natural capital.

11.97 and following – this section is unlikely to age well. Not sure what to do about it.

11.114 Data and databases generally, how do we deal with the household production and passive collection of things like cell phone data or likes on social media?

11.121 – household produced you tube or ticktock content?

11.122 – this is wrong. There are many firms that depend on volunteer user content. This should actually be through to expand the production boundary.

11.156 How are these not natural resource then?

11.178 – this reasonable, but there are two other concerns. First, over time what is an ecosystem asset and what is a natural resource may change as understanding of production processes change. Second, elsewhere in this chapter produce and non-produced natural capital are discussed, but nowhere are those distinctions defined.

11.179 – rather than timber the term forests should be used. Forest can act as natural resources for things other than timber extraction.

11.180 – this is somewhat problematic because there are an increasing number of contracts written on arbitrary ecosystem types, such as conservation easements and REDD+ programs. We need to be clear that if an ecosystem asset can generate a transaction, then it is a natural resource even if it is not extracted.

11.182 – can’t water resources be produced through reservoir management and dam process? Also, can’t land be produced through fill process (look at southern Manhattan, high profile projects in the UAE, and activities in the South China Sea).

11.184 – This needs to tempered some. There are international agreements governing things like deep sea minerals, so that they are assets. Also, local air quality can certainly be managed by local governments as an asset (observe China when it hosted the Olympics and France with respect to water the Sein during its Olympics). It should also be emphasized that is common for governments to act as institutional units.

11.185 – Again I will use air quality, local air quality is tightly connect to worker productivity, that added productivity of improved air quality can be captured by local firms and by taxing authorities. Thus, local air quality is an asset that is relevant from macroeconomic decision making.

11.194 – also need to address mineral rights, right of ways? This is challenging because these rules might very need to vary by country. It is also hard to separate many natural assets from the land they are on.

11.202 further break downs into metallic and battery resources should be encouraged (e.g., nickel, cobalt etc.).

11.203 The advise to allocate water to land if land is the greater value and vice versa will create problems. The reason is that if you start doing this you will always get one or other. Needs to state that efforts should be made to separate the two.

11.205 This is good. It should be further stated that it is rare that biological resources fall do not have institutional owners.

11.207 good job

11.216 – how to tree trees felled for timber that also enable owners to extract admission fees to parks or that used as part of a water management system? These trees should not be treated only as single yield timber products.

11.219 – "Possible benefits derived from the growth of trees not intended for future timber production are not given rise to the recognition of assets." Should be removed. There are many timber growth operations that are made economically viable by collecting payments for other services during the growing period. This many include direct conservation payments. Moreover, permitting for timber may be conditioned on providing these other services.

11.220 – "Any increase in the volume of this underlying asset, which is the result of an increase in the regenerative potential of the forest land, is to be recorded as gross fixed capital formation. Any decline in this regenerative potential should be recorded as depreciation." This is good.

11.222 – something seems missing here.

11.234 – this is good.

- **Simon Schuerz**

Comments by the Environmental-Economic Accounts Sections at the Federal Statistical Office of Germany:

Chapter 11:

11.21: Title above should be: "Natural Capital (excluding Ecosystem Assets)". There should be no confusion between the general asset classification (which may include a placeholder category for ecosystem assets) and what can actually be found in the SNA capital account (i.e. natural resources).

11.22: This paragraph should also give reference to the "missing part" in SNA, namely ecosystem assets.

11.180: A reference to payment for ecosystem services schemes could be made here as an additional exception.

- **Benson Sim**

The chapter should also note that some works of art can be rented and are, thus, fixed assets rather than valuables. For examples, see https://www.curina.co/ and https://artforfilmnyc.com/. Right now, the section on gross fixed capital formation does not mention this.

- **Noemi Frisch _Israel ICBS**

Reading the chapter, it is difficult to understand how natural capital is included in the accounts. One could add a table showing how it is included.

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Celestino Giron_ECB**
    - Crypto assets without liabilities. From the conclusions of the joint AEG/BOPCOM meeting of March 2023 "*The national accounts and balance of payments communities to monitor developments relating to non-liability crypto assets and review the recommendation in case there are significant market, regulatory and/or accounting changes that may justify a revision either before or after the release of the manuals in 2025."* The recent developments in the crypto asset markets (e.g. creation of bitcoin ETFs, development of crypto lending platforms) make it advisable to reopen the discussion on the classification of bitcoin and similar assets.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Jorrit Zwijnenburg_OECD**

Yes, the only issue is that paragraph 11.234 still needs to be updated in light of AEG consultation on natural capital issues note.

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

10 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Para 11.11: "A significant part of natural resources is non-produced, although biological resources may be the result of human involvement, and have thus come into existence as outputs from production processes." This paragraph may have to be adjusted in case "land improvements" (and "cost of ownership transfers of non-produced natural resources) are moved from the "traditional" fixed assets (AN.11) to the fixed assets included in AN.31 (natural resources) and in case the treatment of forest land is changed.

Para 11.28: After the bullet list, for clarity it would be useful to add: "GFCF, depreciation and changes in inventories under item c are relevant for produced natural resources, while acquisition less disposals of non-produced non-financial assets and depletion are relevant for non-produced natural resources." Also this sentence could be added: "GFCF is relevant for produced natural resources that correspond to the definition of fixed assets (see paragraph 11.13), while changes of inventories are relevant for produced natural resources that correspond to the definition of inventories (see paragraph 11.14).

Para 11.30 links “depreciation” to “cultivated biological resources”. It may be useful to generalise the scope from “cultivated biological resources” to “produced natural resources”. In addition, it seems to be clear that “cultivated” is a synonymous of “produced” (and non-cultivated=non-produced). It would be useful to clarify this somewhere in general.

Paras 11.31 and 11.232 and Section E: the reference to “the stock” in these paragraphs may be appropriate to those non-produced natural resources that would be classified as/assimilated to “inventories” if they were produced (mineral and non-renewable energy; fish in the open sea), while it may be misleading for those non-produced natural resources that would be classified as/assimilated to fixed assets if they were produced (the underlying object: for example the fishing open sea; or forest land if after the AEG discussion it will be considered as non-produced). For the latter case (underlying object), it may be preferable to refer to the quality of the underlying object, rather than the quantity.

Also the reference to the “price of the natural resource in situ” seems to be more applicable to “pseudo-inventories” than to “pseudo-fixed assets”.

Last but not least, it would indeed be very useful if section E included (an exhaustive list of) examples of depletion applied to the different cases of non-produced natural capital.

Para 11.32: it tries to make a distinction between natural assets and other non-financial assets. The text however is not fully clear and may be improved.

Para 11.35: “…If the amount is negative it represents net borrowing. It should be matched by a reduction in the net financial assets of the sector, corresponding to an increase in the net financial assets of the sectors with a net lending position.shows the amount of the resourcesrevenues remaining for purposes of lending or that need to be borrowed. Even if funds are not actively lent but are retained in cash, or in a bank deposit, the holder of the counterpart obligations represented by these financial assets has in effect borrowed from the unit holding the cash or bank deposit.” The initial drafting is unprecise. For instance, the net lending will may be 100 (or even 0) while total financial assets and liabilities will be 1000 and will represent the whole spectrum of financial assets and liabilities (not only cash and deposits), so relating a balance (100 or 0) to one transaction (cash, deposit, loans) among the 1000 is not relevant. Better associate the net lending from the non-financial account to the net lending from the financial account.

Para 11.39: “… and what activities are treated as adding to the value of non-produced assets.” Is unclear. Maybe better “and what activities adding to the value of non-produced assets are treated as acquisition of fixed assets”? The place of this sentence within the chapter (under B, and/or C?, and/or D ?) depends on the conclusions of the AEG discussion on where to classify “land improvements” (and “cost of ownership transfers of non-produced assets”). This will also affect the positioning of paras 11.45, 11.47: positive and negative GFCF may also apply to produced fixed natural resources. The cost of ownership transfer may apply to both non-produced and produced (fixed) natural resources.

Paras 11.52, 11.87-11.89 on land improvements: depending on the results of the AEG discussion, this paragraph may need to be moved under section D.

Paras 11.114 – 11.118: under the new heading Data and databases, could benefit from a clearer upfront definition of Data, particularly since the new para 11.115 makes the point that “Data and databases are conceptually distinct types of intellectual property...” but then doesn’t explain how. Ideally, a short extract could be included from the text in paras 22.21 – 22.32, or at least referenced.

Para 11.188: “Moreover, as purchases and sales of land and natural resources are recorded …”. This formulation hints that land is not part of natural resources, which is incorrect.

Para 11.219: “Possible benefits derived from the growth of trees not intended for future timber production are not given rise to the recognition of assets.” The formulation of this sentence is not clear. Possible reformulation: “Trees not intended for timber production are not recognised as assets in the SNA, regardless of any other economic benefits they may confer.”

Para 11.220 assumes that forest land is part of cultivated resources and as such depreciates. This treatment may have to be reviewed depending on the conclusions of the AEG discussion, if forest land (and agricultural land) is finally considered as depletable (hence non-produced). In addition, “Any increase in the volume of this underlying asset […] is be recorded as **gross fixed capital formation**.” GFCF may have to be changed to “negative depletion”.

Para 11.227: “…the costs of ownership transfer are shown as transactions in gross fixed capital formation in the capital account **separately** from the acquisition and disposal of natural resources, …”. It would be useful to clarify where the “separate heading” is located in the classification, whether under the produced non-natural resources (AN.1) or the natural resources (AN.3). At the moment this is not clear.

Para 11.234 may be revised depending on the conclusions of the AEG discussion on the treatment on land.

- **Jorrit Zwijnenburg_OECD**

11.19 and 11.171: It is stated that crypto assets without a corresponding liability relate to assets for which “there is no issuer”, but we think it is better to state that these concern assets for which “there is no claim on the issuer”, as it may still be possible to distinguish an issuer.

11.22: Reference is made to ‘environmental assets’ but not to ‘ecosystem assets’ that were referred to in 11.11. It may be useful to put the environmental assets in perspective (e.g., are natural resources and ecosystem assets a subset of environmental assets?). It may also be useful to refer to these in Section D on ‘Acquisition less disposals of natural capital’. We also suggest considering a slight re-wording of the first sentence to “The SEEA Central Framework applies a broader concept of environmental assets, which are defined as …”

11.22: Reference is made to assets that do noy meet the asset boundary. In this regard, the new SNA seems to restrict fish resources to fish stocks under quota. This may work for fish in open seas, but it is unclear what this would imply for say subsistence fishing activities (or fishing in large lakes)? A similar issue arises in case of fuel wood (firewood) collection by households, where it remains unclear whether this is to be considered timber production and hence would bring the asset within the SNA boundary.

11.42: It may be good to add a reference to 10.62 that includes more detailed information on how to deal with a car used for dual purposes.

11.69: It may need to be specified that it concerns fixed assets excluding natural capital (as this is the topic of this section). If that is indeed the case, you may consider deleting “or fully mature” under item d, as that would relate to biological resources.

11.115: A direct reference is made to the use of a sum-of-costs method for recording the creation of data and databases, but as in 11.105, it may be useful to add a sentence that this is the case “unless the market value […] can be observed directly”.

11.140 to 11.146: The text includes several references to natural resources, although the section is dedicated to fixed assets (excl. natural capital). The text may need to be updated to avoid any confusion.

11.172: It is suggested that the market price of the relevant crypto assets at the date of exchange can be used for valuing barter transactions using crypto assets without a corresponding liability. However, possibly reference can also be made to the market price of the goods or services that are being purchased, i.e., it may be assumed that these will just have a market price, denominated in the domestic currency, and that the amount in crypto is just determined by the exchange rate at that point in time. This may be an easier way to value the transactions.

11.210: The text refers to the fact that “the establishment of license arrangements or quota regimes, including the related appropriation of future resource rents, would be recorded as other changes in volume of assets and liabilities”. However, it is not clear what type of assets: contracts, leases, licenses or the natural capital itself? As a general remark, it is not clear when a valuation based on quota or licences is used, how the assets are to be recorded. It would be very helpful if this would be clearly explained somewhere in the text. For the references to actual sales of the ‘assets’, it may be good to specify that this refers to license arrangements, to avoid any confusion.

11.211: The label above this paragraph reads ‘Biological resources yielding repeat products’. However, as the other two categories concern ‘Cultivated biological resources yielding once-only products, including work-in-progress’ and ‘Non-cultivated biological resources’, it may be better to still include ‘cultivated’ in the label of the first category. It also seems that Chapter 14 uses slightly different labels (see para. 14.59 to 14.63), so it may also be good to align with that. As an overall comment, we need to make sure that we properly align all the headings with the eventually agreed asset classification of biological resources.

11.219: “As noted before, for this type of resources no distinction is made between cultivated and non-cultivated resources. For those resources over which (collective) ownership can be enforced, all growth of trees intended to be used for the purpose of producing timber is considered as being under some degree of human management and control”. The first sentence states that we make no distinction but doesn’t state that this means we see all as cultivated. To avoid any confusion, we suggest to re-word as “As noted before, in case of timber resources over which (collective) ownership can be enforced, all growth of trees intended to be used for the purpose of producing timber is considered as being under some degree of human management and control and therefore treated as cultivated.”

- **Amanda Driver_SA_Biodiversity Consultant**

11.11 (c) First sentence states that “natural resources consist of assets that occur naturally”

Timber is given as an example or as an asset that occurs naturally, but a large amount of timber doesn't occur naturally but is cultivated in timber plantations, often of exotic (non-native) species that would not occur naturally in the area. Suggest deleting timber as an example or a naturally occurring asset (here and elsewhere) as it frequently isn't.

Second sentence says that "A significant part of natural resources is non-produced, although *biological resources may be the result of human involvement*, and have thus come into existence as outputs from production processes."

"may be the result of" seems a substantial understatement. Cultivated biological resources (most agricultural and timber production globally) must surely make up a large proportion of biological resources. Suggest changing to "*are frequently produced* through human involvement".

A larger question: Does the definition of natural resources need to be changed to "assets that naturally occur as well as cultivated biological resources" to be consistent with how the term is being used in the SNA? This would be an unintuitive definition of natural resources, so I'm not recommending this but just pointing out that it's inconsistent to define natural resources as naturally occurring assets when their scope has been broadened substantially beyond that in this context.

11.21 "As noted before, natural capital includes both produced and non-produced assets."

This is inconsistent with the of definition of natural resources as consisting of assets that occur naturally (11.11). Also, **the rationale for including produced assets in natural capital is not clearly explained as far as I can see**.

11.22 "Environmental assets refer to a broader concept and are defined as 'naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity' (SEEA 2012 Central Framework)."

May be useful to mention here that environmental assets include natural resources and ecosystem assets, i.e. are equivalent to natural capital (summarised in Fig 35.1)

Again here there is emphasis in the definition of environmental assets on "natural occurring", which would exclude cultivated biological resources.

11.179 Again the statement that "Natural resources are assets that naturally occur", with no qualification.

Again suggest deleting timber as an example of a naturally occurring asset as its frequently cultivated.

- **Lenka Valenta_Germany FSO**

11.21 This paragraph should rather say that from natural capital, the integrated framework covers only natural resources (as in para 11.178). Moreover, in light of preceding paras 11.12-11.14 clearly defining produced and fixed assets excluding natural capital, it should be clarified in this paragraph, which natural resources (from the assets classification) are fixed assets (to be depreciated) and which inventories, i.e., how produced assets are defined under biological resources. This is crucial also in the context of breakdowns in para 11.28.

11.164 Types of assets included in contracts, leases and licences: it should be explained why "permits to use natural resources" were deleted and where they are covered now.

11.209 says: "…*Moreover, if the access rights provide very long term or indefinite access to the assets, the market value of these rights may provide a direct estimate of the total value of the underlying asset*". This sentence above is not clear. Does "indefinite access to the assets" imply a sale of the assets (i.e. a change of economic ownership)?

In addition, how do "underlying assets" come into play? And what are those "underlying assets"?

What is the connection with permits to use natural resources (classified as assets)? Were they reclassified to natural resources from permits to use natural resources? Please explain.

11.219-11.221 Cultivated biological resources yielding once-only products, including work-in-progress:

First, these paragraphs and the following paragraph 11.222 do not correspond to the classification shown in the Background document to the report of the Intersecretariat Working Group on National Accounts (3f, 2024), thus it has not clear whether the classification has changed and for what reasons.

Second, the heading "<u>Cultivated </u>biological resources yielding once-only products, including work-in-progress" seems inconsistent with sentence in para 11.219 "…*the most prominent example being the growth of trees for timber production. As noted before, for this type of resources no distinction is made between cultivated and non-cultivated resources*." If so, it should be rather stated that by convention these are treated as cultivated, if ownership rights are exercised.

Third, work-in-progress on cultivated biological resources yielding once-only products includes:

- livestock raised for products yielded only on slaughter, such as fowl and fish raised commercially – these animal resources yielding once-only products are completely omitted from the text.

- trees and other vegetation yielding once-only products on destruction (here are presumably included timber resources).

Assuming that work-in-progress on cultivated biological resources yielding once-only products is covered, what are then "Cultivated biological resources yielding once-only products"? What is left here?

The underlying assets like e.g. forest land and possibly also agricultural land are to be recorded under land, thus what else is included here? Please clarify.

11.220 It looks like if forest land (underlying asset) was reclassified here from land (AN.311), which we would oppose. But even if this would be the case, the treatment of regeneration and depreciation of these biological resources is not clear.

It is said "…*Any increase in the volume of this underlying asset, which is the result of an increase in the regenerative potential of the forest land, is to be recorded as gross fixed capital formation. Any decline in this regenerative potential should be recorded as depreciation*".

Is there a third asset (i.e. fixed asset) to be depreciated? (land is not supposed to be depreciated in the current system, see e.g. para 17.41-17.45, inventories are also not depreciated). Or how shall we understand this treatment? Please clarify.

11.234 It is not clear how many "combined assets" are considered now in SNA for natural resources, what are their compositions (does not seem to be just 2 assets in some cases …?), and how and where these assets are supposed to be classified according to the asset classification. We would like to recall that the treatment of land has not changed compared to 2008 SNA. It is also not clear how the "combined assets" are supposed to be depreciated (see above our comment to para 11.220).

- **Marshall Reinsdorf_ISWGNA Editorial Team**

11.24 says that capital transfers may be in cash but then says that ownership of an asset other than cash changes. This is confusing because a cash transfer results in a change of ownership of cash assets.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

13 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Eli Fenichel_US Yale Univ**

Reference to non-produced and produced natural capital are confusing, given the fact that the higher division now appears to be produced, non-produced, and natural capital. I'm not sure the references to produced or non-produced natural capital are all that helpful.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

For consistency, we suggest amending the term "entity" to "item" instead, for instance in paragraphs 11.5, 11.6, 11.7, 11.10 and 11.114.

- **Rosie Maslin_UK Government Response**

The UK recomened scrutinising the method described in 11.191.

The method described fails when the price of the costs of extracting the asset effectively internalise the value of the asset itself. Value accrues to the scarcest asset, as is well known in economics, which in this instance will be the extractive technology (e.g. wind turbines) and hence the residual value is generally biased downwards, leading to the natural resources being under-valued and sending a misleading signal to decision makers that the impact of extraction is less than in reality, suggesting the social optimum rate of extraction exceeds reality. This is clearly not the intent of this change, and the UK advises that this method should be rapidly scrutinised. It would be better to not make this change than for our data to misleadingly lead to over-extraction and consumption of natural resources.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

Para 11.69 (d). "…whether or not they are fully completed or mature". "or mature" should be deleted, given that this section excludes natural capital.

Para 11.98: "Other products, such as computer software (including data and databases) …" Delete "including", as data and databases are not part of software. See also para 7.129.

Para 11.233: "The same holds for transfers of natural resources out of economic activity because of changing technology, **or reduced demand** for the resulting output or for legislative reasons. However, **the stranding of these assets is to be recorded as revaluations**." It would be useful if the difference between decline in demand to be recorded as downwards reappraisal (OCV) or as "stranding" (revaluations) could be clarified in the SNA (current 13.27 text is not crystal clear).

- **Jorrit Zwijnenburg_OECD**

There is an inconsistency in the labelling of natural capital categories between Chapters 11 and 14. Chapter 11 refers to 'natural capital' (in Section D) and uses two labels (i.e., a) Land, mineral and energy resources, water resources and other natural resources (above 11.183); and b) Biological resources (above 11.205)). Chapter 14 refers to 'natural resources' (Section 3) and uses three titles (a) Land; b) Mineral and energy resources; c) Biological resources, water resources and other natural resources).

11.5 to 11.7 and 11.114: For consistency with changes proposed in these paragraphs, all references to 'entity' should be replaced by "item", which is currently not yet the case.

11.8: We notice that 'exploiter' is used here instead of 'user/extractor'. This may indeed be a better term to apply consistently throughout the SNA, particularly given the fact that 'extractor' seems odd in case of renewable energy resources. In any case, we have to make sure that we use the terminology consistently.

11.11: The definition in this paragraph is not really correct from our perspective, as cultivated assets do not “occur naturally” (at least not at those locations) and in some cases (due to genetic modification) do not occur naturally at all. How about defining by enumeration: “Natural capital, or more precisely in the context of the SNA, natural resources consist of assets that naturally occur, such as land, water resources, timber and fish stocks, and mineral and energy resources that have an economic value and over which ownership may be enforced and transferred, and cultivated biological resources that have come into existence as outputs of production processes”.

11.13: The paragraph implies that fixed assets exclude cultivated assets. However, this seems to be at odds with other references in the chapter (e.g., 11.28, 11.29, 11.30, 11.32) that seems to imply that natural resources are also part of fixed assets. This may require some rephrasing.

11.98: The addition implies that data and databases are part of software which is not the case.

11.116: “The cost of preparing data in the appropriate format” is still mentioned as one of the costs feeding into the creation of the database, but we don’t think this still holds with the definition of data. To us, this resembles the costs associated with “processing, cleaning and organising the data” as referred to in 11.117.

11.190: “Any payments made by the user/extractor of a non-produced natural resource to the owner of the natural resource, which are linked to the use/extraction of that resource, in particular to the quantity and/or value of that resource, should be recorded as rent. These would include, for example, royalties, sur-taxes, and permits. However, payments that are paid by the user/extractor on the same basis as other corporations who are not users/extractors of natural resources (e.g., standard rate corporation taxes, dividends, payments for services) should not be recorded as rent.” The first part seems to be at odds with the recommendations in the SEEA CF, which states that any taxes linked to the use/extraction of a resource should be treated as ‘specific taxes on products and/or production’ (and/or income). (see also comment made under 8.171).

11.221: The text” due to the considerable time […] is appropriately discounted” suggests that one should apply a net income method when measuring work-in-progress, which is not how the majority of countries seem to be valuing standing timber, which is more often based on the stumpage value method (i.e., stumpage price x stocks of standing timber). Perhaps one could reword as “Due to the considerable time it takes before a tree is mature enough for timber production, it is important, however, that the work-in-progress of the trees is based on their current value, which can be approximated by appropriately discounting their expected harvest revenues when mature. Other methods such as the stumpage value method or consumption value method may provide alternative valuation methods."

- **Amanda Driver_SA_Biodiversity Consultant**

11.180 Paragraph on ecosystem assets.

Includes the sentence: "Ecosystem assets are not recognised in the system of national accounts, *mainly because no monetary benefits can be derived from them*." This is surely not the correct reason? Many ecosystem assets provide ecosystem services that have direct monetary benefits. Provisioning services are noted in the paragraph as an exception, but they are not the only exceptions. Monetary benefits are also derived from regulating services such as flood regulation that prevents damage to property and cultural services such as nature-based tourism.

There is recognition elsewhere that some ecosystem services provide direct monetary benefits, e.g 1.66.

- **Lenka Valenta_Germany FSO**

11.41 It should be explained how solar panels, wind power plants, geothermal and heat pumps of household sector are included (under which asset in asset classification), and among other to ensure consistency with para 7.27 on production boundary. User-generated content on digital platforms produced by households fulfilling the criteria of assets (IPPs), as discussed in para 11.121, could be also mentioned in this paragraph to clarify the treatment.

11.312 The definition of depletion uses term "non-produced natural resources" (also commented under Ch7). Non-produced natural resources consist of land, mineral and energy resources, water resources, other natural resources and uncultivated biological resources (= non-produced). From all of these "non-produced natural resources", depletion is only relevant for 1. non-renewable mineral and energy resources and 2. uncultivated biological resources yielding once only products.

In this context and to avoid confusion and false expectations, the use of "non-produced natural resources" in this definition should be reconsidered.

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>The radio spectrum</u>

Comments: The inclusion of the radio spectrum as a natural asset is a little bit odd. The benefit of statistical descriptions is that they correspond to the real world both in physical and conceptual respect. In SNA as well as SEEA the physical description should first and foremost be accurate. The second step is to give the quantities a common accounting unit. In SNA this is the monetary unit. Looking on the issue of radio spectrum from a physical point of view reveals that payments for the use of radio frequencies should not be recorded as rent. The radio spectrum is not a natural resource in a physical sense. It describes the variation in the wavelength of a natural phaenomena (a force) like magnetism or radiation in general caused by the interaction of natural resources. Electromagnetic radiation (waves) is a flow of energy emitted by charged particles (electric currency). Electromagnetic radiation can also be generated by transmitters created by human ingenuity.

Government has regulated *the activity of generating electromagnetic waves* by allocating the frequencies/wavelength that each telecom operator is allowed to use in its economic activity. Operators using the same wavelength would otherwise face the risk of interfering with each other to the harm of both parties. The permission to use a specified part of the bandwidth is like organising the traffic to avoid accidents.

The issue of the radio spectrum also reveals that the view that what can be used to generate revenue and income must be a kind of asset is not a good indicator of what to include in the SNA asset boundary. When governments sold the right to use specific frequencies it was thought that government had an asset that was partitioned (licenced) to users for a specified time. This was not the case instead government wanted to regulate the use of the limited bandwidth of the microwave spectrum by allocating the utilisation of it to the telecom enterprises for mobile phone communication. The regulation was thought to be best implemented by the market and for this purpose the permission to use the bandwidth was allocated (sold) at auctions. In this sense the government allocated the bandwidth to users with the highest willingness to pay, thus reflecting the most efficient use of the limited capacity of the radio spectrum.

For the reasons mentioned above we are of the opinion that the radio spectrum should not be part of the SNA asset boundary. Payments for the possibility to use the radio spectrum should be regarded as payments for a permission. The payment to the government is a tax payment. If the permission is transferrable at a gain it should be recorded as a contract valued according to the gain above the tax payment.

Furthermore, the recording we propose also makes SNA and SEEA align on this issue.

We propose the following wording for para. 11.21 and 11.204:

Natural capital

11.21 As noted above, in the context of the SNA, natural capital is restricted to natural resources. These resources can be broken down into the following categories: land; mineral and energy resources, both non-renewable and renewable resources; biological resources; water resources; and a residual category other natural resources. As noted before, natural capital includes both produced and non-produced assets.

Other natural resources

11.204 The category other natural resources includes natural resources n.e.c. Given the increasing move to carry out environmental policy by means of marketintervention, it may be that other natural resources will come to be recognized as economic assets. If so, this is the category to which they should be allocated.

<u>Fish resources under quota regime</u>

Comments: Natural resources enter the economy by activities of extraction, logging, hunting and fishing. In case the area (space) and the natural resources located in the area, are under legal ownership and control, the resources should be included in the balance sheet of the owner. Control can be evidenced by the possibility to separately from land (or space in general) transfer the entire resource in exchange for money. Otherwise, the resource is an indistinguishable part of the land value, or it is only permitted to be used by the government alone or as part of international agreement.

The role of government is to allocate the use to economic agents according to the national legislation. Natural resources that are permitted by government to harvested on common grounds or the area owned by other units should not appear in the balance sheet of the SNA standard accounts. In this sense legal ownership and economic ownership of natural resources are identical.

Permissions to harvest a natural resource can if transferable be regarded an asset included in the category of contracts, leases and licenses.

A fishing quota is a permission to harvest a specified quantity of the fish stock in a given geographical location. There is no guarantee that the harvest will be successful and furthermore, ownership in a physical sense means ownership rights and control of particular items and fishing quotas and other permissions rarely specify which items to be harvested. Transferring the fishing quota is therefore not the same as transferring part of the fish stock, but only the right to fish a specified quantity out of the stock.

Logging rights are usually for specified trees or area which means that the items are known. Logging rights are normally valid for a longer period (several years) but the trees are still owned by the forest land owner. When logging takes place, the trees are sold under the terms in the logging contract to the logging enterprise. If the logging right is unused within the specified time of permission, it is automatically transferred back to the landowner.

We propose the following wording for para. 11.22:

11.22 Environmental assets refer to a broader concept and are defined as "naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity" (SEEA 2012 Central Framework). In macroeconomic statistics, environmental assets are only recognised in as far they meet the asset boundary, by providing monetary benefits to their owners, either individually or collectively. Assets over which ownership rights have not, or cannot, be enforced, such as open seas or air, are excluded.

<u>Valuation of forest land</u>

Comments: Valuation of forest land can be undertaken by several methods and the NPV is one but if there exist assessments made by independent experts these should be used prior to calculations dependant on assumptions made by the NSI or any other producer of NA. Regarding the regenerative potential please confer our view expressed in relation to paragraphs 7.264 and 11.234.

We propose the following wording for para. 11.220:

11.220 Two types of assets need to be considered and estimated for this type of cultivated biological resources yielding once-only products: the underlying asset, i.e., the forest land, and the work-in-progress representing the growth of trees. Market prices for forest land are usually not available, and need to be approximated.

<u>Timber resources</u>

Comments: The valuation of standing timber should follow the principles of valuation of inventories. Inventories are valued according to the exchange value in the current period or current market price of the goods held in inventory. The nominal net growth of work in progress will in the case of standing timber be the increase in value between opening and closing balance.

The information needed for the purpose of estimating the standing timber is the quantity and prices broken down by diameter classes, region and tree species growing in the forest. The information on quantities is normally included in the forest survey. The prices of different diameter classes and tree species might not be available for all combinations. If this is the case the missing values should be modelled. If the price corresponds to the pick-up price at a road the costs of logging and transport to the pick-up place should be subtracted to reflect the value of the timber volume standing in the forest.

An alternative method if the principles of inventory valuation are not possible to apply is discounting of future revenue taken into account all relevant costs.

We propose the following wording for para. 11.221:

11.221 Work-in-progress related to cultivated biological resources yielding once-only products represents the accrual accounting of the growth of trees intended for the future production of timber. A distribution of output over the accounting periods of the growth of the trees in proportion to the costs incurred may not provide satisfactory results when looking at individual generations of trees, as a disproportionate share of the costs may be incurred in the beginning and the end of the period of growth. The growth of work-in-progress is preferably estimated as the difference between closing and opening stocks of standing timber. The stock is estimated by combining prices and quantities of standing timber broken down by age or size classes, tree species and region or whatever is the most appropriate. In case the price information reflects the sales price at a pick-up location the price needs to be adjusted for the costs of logging and transportation in order to reflect the value of standing timber.

Given the fact that the growth of trees is a more or less continuous process, the available price information can be interpolated and extrapolated to represent size or age classes of different tree species not represented in the price data that is collected by surveys.

Due to the considerable time it takes before a tree is mature enough for timber production, and if the price information only reflects the value of mature trees, it is important, however, that the growth of the trees in subsequent periods is appropriately discounted. For the farming of single-use plants and livestock which take more time to mature than the reference period (quarter, year), the guidance for the recording and estimation of work-in-progress is similar to that for other products; see section B2 of this chapter.

<u>Terminal costs</u>

Comments: The costs of restoring a production site after production has terminated are maintenance costs. Maintenance can be undertaken during or after the operation of a plant depending on what's the most cost-efficient regarding production including the risks of human life. Maintenance costs that are compulsory upon the permission of undertaking a particular economic activity, like a nuclear power plant, or agreed between the landowner and the producer are costs that need to be accounted for. But, since there is no payment or maintenance/restoration work undertaken until the production has terminated such future costs have to be recorded as provisions in the same way as social contributions set aside for later payment of pensions. Accounting for costs in a social accounting framework like SNA must be done for the periods the human effort is used or the output of goods of previous human effort is used up in the restoration after production has terminated.

The cost for the decommissioning of nuclear power plants has no impact on the usefulness and value of the plant. The construction of the plant is made by human effort, and this investment represents the social cost of the plant. Social cost shall be charged equally against the output in volume terms to derive net operating surplus. The radioactive contamination has an impact on the distribution of consumption of fixed assets only if it reduces the output in volume. The plant will, otherwise, work as usual and the construction costs of the plant shall therefore, in the same way as for other investment goods, be accounted for as consumption of fixed assets in relation to the output.

As we understand the proposed recording a value should be added to the asset, that later is to be decommissioned, to avoid negative value of the asset when it depreciates. In our view this is counterintuitive. It means that we add a value that is supposed to depreciate before the actual investment is made. If we care for an accurate physical description of what happens in the real world depreciation cannot occur prior to the activity that creates the value depreciation is charged against. By recording the decommissioning costs as current costs this conundrum is avoided. The idea of recording terminal costs as capital costs stems from a view that there is a one-to-one correspondence between capital assets owned by the producer and the income received by the using the asset. But, when capital costs appear at a time distant from the actual output is produced giving rise to the income flow, this correspondence ceases to be valid. Manipulating with the accounts will not help providing an accurate description of the economic reality. If we instead understand the terminal costs for what they actually are, namely current restoration and maintenance costs, the picture is turned right again from being upside down.

Decommissioning regards mainly nuclear fuel and the plant. These costs are due to the waste from production and externalities made to the construction and removal is necessary if the site shall be used for other purposes than nuclear technical activities. In this sense decommissioning restores the site into a state it previously had. The decommissioning work is primarily the handling of nuclear waste and contaminated material to reduce the negative externalities of the production activities undertaken on the site. Removing the externalities are in most cases current costs recorded at the time the activities take place. In case there is land improvement included in the decommissioning costs this part is recorded as capital formation in the accounts of the landowner.

We propose the following wording for para. 11.229 through 11.231:

Terminal costs

11.229 Terminal costs that follow from agreements between the producer and the landowner or from legislation are recorded as costs of production in the periods they arise. In lack of detailed data it is recommended to assume that terminal costs arise in proportion to the volume of output produced.

Since the externalities from production is restored or compensated after production has terminated these costs are not paid in the same period they arise. The recording in the production account is done in the same way as for the provision of pensions recorded as a cost when the liability arises and when not funded in a segregated account (paid to an insurance enterprise) also recorded as a liability in the accounts of the enterprise.

Terminal costs can in principle be current and capital costs. In the case of the decommissioning of a nuclear power plant most of the costs are current. These include the safe transportation and storage of nuclear fuel waste and demolition and safe storage of the structure and equipment. If the land underlying the power plant is improved in relation to the situation before the plant was built these costs are capital and should both be included in the provisions recorded as production costs and recorded as a capital transfer. Costs on land improvement, are recorded as a payable capital transfer for the period the land improvement is made and included in the accounts of the landowner as a receivable capital transfer and correspondingly reducing the provision asset of the landowner.

11.230 In practice it might be difficult to separate capital costs from the total of terminal costs and in such cases the entire terminal costs should be recorded as current costs in the period the termination activity is undertaken. The costs are reducing the corresponding liability. In case the provisions made, accounted as a liability, are short of the actual terminal costs then the difference is recorded as production costs of the enterprise responsible for the termination of the plant at the time decommissioning takes place.

11.231 should be deleted.

<u>Depletion and regenerative potential</u>

Comments: Depletion and degradation of natural resources in general are externalities that do not belong to the standard accounts of the SNA. Accounting for these externalities in the way proposed does not take into account the actual social cost of these externalities. Instead a hypothetical cost is included calculated as a loss in the future which we do know very little about in particular in the light of technical development and productivity increase that might make the natural resources more economically abundant. We agree that there are benefits in additional information on the costs of externalities. But there exist several methods to support such a recording and we prefer a method that is better aligned to the concepts of social accounting.

We do not think it is meaningful to include the variation in the regenerative potential in the standard accounts. The regenerative potential is affected by several causes of which few are intentional in the sense of a deliberate meaning to cause harm to the economically useful population of animal and plants. Unintentional economic events are externalities that unless compensated for do not belong in the standard accounts and should only appear in the other changes in volume account if applicable or otherwise in the extended accounts. Above this climate change also affects the regenerative potential. So even if it is possible to measure the total growth in the regenerative potential we need to distinguish between direct and indirect causes and this we think is beyond the measurement of GDP and NDP.

We propose that the part describing depletion (§§11.232-11.234) is moved to the part in SNA covering extended accounts. If §11.234 is kept within the standard accounts, it should be revised in the following way:

11.234 Land in its natural state and renewable energy resources are not subject to depletion. However, in the case the value of land is combined with another asset, the combined asset may be subject to depreciation. Biological resources yielding repeat products are typically classified as fixed assets, and the decline as a result of their physical deterioration and normal rates of obsolescence and accidental damage should be recorded as part of depreciation.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS:

terminal cost, additionally to our comments under question 4:

2008 SNA attempted to capture accurately in the net worth the future expected cost to remove environmental damages, where this will be leading to monetary flows in the future. The expectation of economic agents undertaken investment decision will differ as to whether or not they will need to bear clean up costs in the future. The 2008 SNA presented the effect on net worth correctly, whereas this is no longer the case in the draft 2025 SNA. This reversal of the 2008 attempt to capture environmental cost actually evidenced by future monetary flows (and provisions for them) seem to run counter to attempts in other areas to price in the environmental impact of the extraction of natural resources (depletion), despite the later not being evidenced by (expected) monetary flows. Therefore, the draft 2025 SNA seems to go in different directions in the area of the environment. We note that terminal cost are mentioned in the consolidated list of recommendations, but not discussed to our knowledge in the TT, but wonder whether the reversal of the 2008 SNA innovation to reflect correctly the net worth does create a conceptual contradiction with the 20025 SNA attempt to measure much more complicated phenomena not evidenced by monetary flows in the area of the environment.

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4 Do you have any other concerns with this chapter?

10 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 11. It is suggested that the description and methods of calculating depreciation and depletion be expanded to ensure that they accurately reflect economic reality. This includes clearly defining the scope of depreciation and how it is calculated, as well as adjusting the useful life of assets to align with current economic conditions.

Chapter 11. It is recommended that a thorough review be conducted to validate the extent to which recommendations from international accounting standards have been applied in company accounting. Although standards have advanced, it is important to ensure that these adaptations are adequately reflected in accounting practice.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

The distinction between produced and non-produced assets is fundamental in national accounts. With the (correct) creation of a separate asset category for natural capital, including both produced and non-produced assets, it is essential that the classification clearly indicates which natural assets are produced and which ones are non-produced. This should be made clear in all chapters where natural assets are discussed.

Para 11.5 refers to "the owner of goods and services". The notion of owner of a service is curious. A service is produced and consumed, not owned.

Paras 11.8, 11.191, 11.197, 11.208 and 11.210: "Resource rent" is repeatedly used in these paragraphs. A clarification of terminology regarding resource rent is needed. See detailed comments to chapter 27.

- **Jorrit Zwijnenburg_OECD**

11.171: Reference is made to the fact that "many of these crypto assets do not yet act as a medium of exchange; instead they are often looked upon as a store of value", but in view of the emerging use of these cryptos in other transactions (e.g., crypto lending), it may be better to remove this specific sentence.

11.200: We suggest to delete "mineral and" on the first line as this is not needed and to replace "sun" by "solar radiation" or "solar energy" and "wind" by "wind energy" on the second line.

11.201: In the last sentence, 'original owner' should be changed into 'legal owner' for consistency purposes.

11.202: We suggest to add the words "mineral and" on the second line between "non-renewable" and "energy resources" and to replace "coal resources" by "coal and lignite". Finally, we suggest to change "other non-renewable mineral and energy resources" into "other mineral and non-renewable energy resources".

- **Amanda Driver_SA_Biodiversity Consultant**

11.87 on land improvements

"Land improvements are the result of actions that lead to major improvements in the quantity, quality or productivity of land, or prevent its deterioration. Activities such as land clearance, land contouring, creation of wells and watering holes that are integral to the land in question are to be treated as resulting in land improvements."

These activities are almost always destructive to ecosystem assets, especially natural ecosystem assets. Although land is understood to be different from ecosystem assets, they are related (as discussed in Chapter 35). To avoid potential confusion between "land improvement" and ecosystem restoration, suggest changing this term to "land preparation", which captures the intended meaning of preparing land for production activities.

11.197 Includes: "In the case of biological resources, it may also be difficult to delineate the value of land from the value of plantations yielding repeat products as well as from the net present value of future resource rents related to the exploitation of forests for timber production (excluding work-in-progress)."

Important to change "forest" to "forest land", for consistency and to avoid confusion with forest ecosystems, which are not the same as forest land.

Is it possible to include an agricultural example as well as a forestry example? (Also note that plantations can include agricultural plantations (such as sugar or banana plantations), but in this sentence seem to be referring to timber plantations.)

11.205 "The growth of animals, birds, fish, etc., living in the wild, or growth of *uncultivated vegetation in forests*…"

Change “uncultivated vegetation in forests” to just “uncultivated vegetation” or “uncultivated vegetation including trees”. There are many forms of uncultivated vegetation in many types of ecosystems that provide uncultivated biological resources.

“Similarly, the *forests* or other vegetation growing in such regions are not counted as economic assets.”

Replace “forests” with “trees”. The term forest should always be qualified as either forest land or forest ecosystem, as these are not the same. It's the trees that are being referred to here, not the land or the ecosystem. Trees also occur on non-forest land and in many ecosystem types other than forests.

11.206 Agree with the treatment of biological resources providing repeat products as cultivated biological resources.

11.207 Not sure if this is the best place to note this, but it’s important that non-cultivated biological resources yielding once-only products are not limited to wild fish. They also include other wild-harvested animals and wild-harvested plants (such as teas, medicinal plants), which are important in some contexts (probably more so in developing countries). (Also para 11.222, 14.60)

11.221

In the middle of the paragraph: “Given the fact that the growth of trees is a more or less continuous process, *with a forest typically consisting of trees in different age categories*, an equal distribution of the growth over the life-length of the tress is considered a good approximation.”

The phrase “with a forest typically consisting of trees in different age categories” applies to natural or semi-natural forest land, not to timber plantations, which are a major form of timber production. Rather delete this phrase – the sentence stands without it.

11.222 “Non-cultivated biological resources consist of animals, birds, fish and plants that yield both once-only and repeat products…”

This seems to contradict the earlier statement that biological resources that yield repeat products are always treated as cultivated.

“In practice, these resources are restricted to migrating biological resources, such as fish in open seas, which are subject to some form of quota regime”.

Suggest that this is too limiting. These resources could include wild-harvested plants, which may or may not be subject to regulation on off-take rates. Could say “In many cases these are migrating biological resources”.

- **Lenka Valenta_Germany FSO**

11.22 The role of this paragraph on environmental assets is not clear, rather confusing. One would expect here rather information on ecosystem assets (the other part of natural capital, not covered by integrated framework and thus not included in the production account).

11.179 says: … "*In monetary terms, the asset boundaries of the SEEA 2012 Central Framework and the integrated framework of national accounts are the same…*".

Among other radio spectra are not covered by the SEEA-CF, see footnote 48 "*The 2008 SNA also includes radio spectra within its scope of natural resources, as the utilization of the radio spectra generates significant income for various economic units. In the SEEA, radio spectra are not considered part of the biophysical environment and are excluded therefore from the scope of environmental assets*".

11.189 "subsoil resources" – we assume that subsoil resources (or assets) are synonym for non-renewable mineral and energy resources. If so, preferably the term from the asset classification (Non-renewable mineral and energy resources) should be used in the whole SNA text.

11.211-11.212 Heading: Biological resources yielding repeat products - this heading should include "cultivated" i.e. "Cultivated biological resources yielding repeat products" to be consistent with heading "Work-in-progress on cultivated biological resources yielding repeat products". Otherwise, it is not clear, why the word "cultivated" was deleted.

11.216-11.217 Tree, crop and plant resources yielding repeat products - symmetrically with para 11.215 (for animal resources yielding repeat products), depreciation of these fixed assets should be mentioned.

- **Laura Wahrig _Eurostat**

Laura Wahrig / Floris Jansen Eurostat D.1 GFS

11.59 "Although incurred at the end of the asset's life, such terminal costs are added to the acquisition value of the assets (see paragraphs 11.228 to 11.230)." Should be 11.229 to 11.231?

11.55 indicates that certain terminal costs are part of the cost of ownership transfer. **11.229** changes the treatment in 2008 SNA, by delinking the actual expenditures on decommissioning from transactions in assets. Yet, the actual expenditure are referred to a " actual investment expenditures". This is unclear and misleading, since presumably P.51g (capitalised) would no longer be recorded for decommissioning.

11.229 also mixes the treatment in the balance sheet of the core accounts with supplementary items in the balance sheet. This should be avoided for clarity. Net worth is (counter-intuitively) affected due to this treatment (as the net worth increases more when acquiring an asset for which decommissioning expenditure will become necessary than when acquiring an asset for which this is not the case). The rationale for this, and a kind of disclaimer for the effects on the balance sheet and balancing items should be clearly described. It should further be clarified how transfers to responsibility of decommissioning to government are treated in the balance sheets.

11.59 indicates that the terminal costs are (still) part of the cost of ownership transfer, treated as P.51g and are added to the acquisition value of the asset. Given the treatment then described in 11.229, it is unclear what could be the counterpart of the transaction described in 11.59?

11.231 Is there really further discussion in chapter 17?

11.247b should be qualified to include only investment projects in which the individual does not ownership rights.

11.247d "over two or more years" should be deleted here rather than it being added in chapter 30. Or the inconsistency should remain in the text in the absence of discussion. See please comments in chapter 30.

Chapter 12: Financial account

2 Comments

- **Tatsuya Sekiguchi_Japan NA**

Paragraphs: 12.80 and 12.81 （Lending crypto assets）

The treatment in the SNA of the lending of crypto assets requires clarification. Conceptually, different types of lending transactions according to the combination of assets could be envisaged: (1) cash vs NLCA (Non-liability crypto assets used as a means of payments), (2) stablecoins vs NLCA, and (3) NLCA vs NLCA. In the current 2025 SNA, securities repurchase agreement and security lending transaction are regarded as financial transactions and are classified as "loans" in Chapter 7 (paragraph: 12.80). Additionally, Chapter 7 (paragraph: 12.81) explains as the following: If a securities repurchase agreement does not involve the supply of cash (that is, there is an exchange of one security for another, or one party supplies a security without collateral), there is no loan or deposit. In the case of NLCA lending, the assets lent are non-financial assets.

One question arising from this treatment is whether (1) cash vs NLCA lending should be regarded as a financial transaction. A second question is how to treat (2) stablecoins vs NLCA and (3) NLCA vs NLCA lending transactions. Further explanations to clarify those issues should be included in the 2025 SNA or supplementary documents, such as a compilation guidance.

- **Celestino Giron_ECB**

12.127 c To be in line with the way options and CDS are seen in the market, better say "at maturity, forwards payments can be positive and negative, while in options they are positive or zero"

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The UK notes that this chapter has not been previously circulated for global consultation. We expected that there would be little to no changes from SNA 2008.
The significant changes made, make this chapter difficult to read.

Partly, this seems to be due to multiple missing tables and codes. It is difficult to comment on draft without access to the chapter tables. The draft is incomplete without the tables and should be reissued with the tables for comments.

- **Jorrit Zwijnenburg_OECD**

Yes

- **Celestino Giron_ECB**

12.58 Draft is too general. GN F.7 states only e-money issued by deposit-taking institutions are transferable deposits:
Members agreed with treating e-money used for direct payments to third parties—including for cross-border payments—as transferable deposits (Option 4) when they are liabilities
of deposit-taking institutions.

12.37 GN F.4 also mentions commodity derivatives within the risk categories.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

8 Comments

- **Mark de Haan Netherlands**
  - End of paragraph 12.12: “In all cases …non financial accounts.” What is added here in the draft text is also mentioned in the last sentence of the paragraph. My suggestion would be “In all cases of transactions involving financial instruments mentioned above the first pair of entries appears in one or more of the non-financial accounts”.
  - First sentence of paragraph 12.23: ‘contingent assets and liabilities’ instead of ‘contingent liabilities’.
  - Paragraph 12.34: The second to last sentence seems to suggest that all increases in value over time for bonds represent interest. It should be made clear that this is only the case at the time bonds are repaid.
  - Paragraph 12.124: At the end the paragraph a reference is made to ‘usually other investments’ whereas earlier in the paragraph it was stated ‘usually classified under deposits’. This seems inconsistent.
- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Para 12.8: “Financial claims represent all financial instruments that give rise to an economic asset that has a counterpart liability, including shares and other equity in corporations” may be deleted here, or merged with the definition of financial claims provided in para 12.7. This double definition of financial claims is redundant and possibly confusing.

Para 12.18: Intermediation is usually distinguished from financial market. In addition, banks do not take deposits to provide loans; they provide loans (creating deposits) and take deposits (they created or not) simultaneously. Generally, there is a confusion between the concept of net borrower/net lender and the one of investors/issuer of liabilities. HH, net lending sector, take loans. NFC, net borrowing sector, invest in financial assets. We suggest the following adjustments: “In many other cases, financial intermediaries have as their special function the creation of a financial market that links matching of lenders’ (investors) and borrowers’ needs indirectly. [...] The financial institutions incurs liabilities to investors net lenders through taking deposits or issuing securities and providing the financial resources thus mobilized to borrowers...”

Para 12.81: We doubt about the usefulness of the addition “However, margin calls in cash under a repo are classified as loans.” GN F.10 does not foresee different treatment of cash provided initially in a repo and subsequent margin calls. As indicated in GN para 50, margins can be classified as loans, deposits or other accounts, and not as loans only.

Para 12.112: “real estate” should not be deleted, as investment funds can invest in real estate. Only if their income comes from real estate activities for more than 50% are they reclassified as non-financial corporations. We suggest leaving “real estate” and adding a clue to reflect this feature.

- **Jorrit Zwijnenburg_OECD**

12.69: “Money market instruments” is added as an additional example of debt securities. However, as certificates of deposit and commercial paper are examples of money market instruments, it may be better to talk about “other money market instruments”. This may avoid any confusion.

12.70: It would also be good to refer to ‘debt tokens’ as more common crypto assets that would qualify as debt securities. They represent debt instruments such as corporate bonds but relying on cryptography. It may be important to clarify that, as otherwise readers may think it only concerns utility tokens and crypto assets designed as a medium of exchange within a platform only. This may also require some changes in 12.77.

12.84: In view of the emergence of crypto lending, some text may need to be added on that as well.

12.120: The title ‘Entitlements to non-pension benefits’ could be further clarified by adding a reference to social insurance, as that is (if I understand correctly) what this item relates to, correct? This may help to distinguish it, among others, from ‘non-life insurance technical reserves’. So perhaps ‘Entitlements to non-pension social insurance benefits’.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

12 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

Paragraph 12.116 - *"Life insurance and annuities entitlements show the extent of financial claims policyholders have*
against an enterprise offering life insurance or providing annuities. The only transaction for life insurance
and annuity entitlements recorded in the financial account is the difference between premiums less service
charges receivable and claims payable." The word, “claim payable”, in life insurance and annuities entitlements session should be replaced with “benefits due” to make it consistent with chapter 24: Insurance and pensions.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Section C seems to be missing – presumably this is Section 9 of Chapter 12.

There is considerable repetition of text between SNA chapters 12 and 25 there is scope to reduce the repetition by cross referencing. The UK expect this will be addressed in the final edit.

Lots of detail on financial derivatives has been included in chapter 12 which is more than other financial instruments in this chapter. These are repeated later in chapter 25 – e.g., 12.124 and 25.39. The same detail may not be required in both chapters.

- **Martha Düker_Deutsche Bundesbank**

Paragraph 12.136 currently states that margins always remain with the original owner ("Ownership of the margin remains with the unit that deposited it."), which was previously only the case for repayable margins, and that they must be recorded ("They are recorded as an increase or decrease in deposits, loans, or other accounts receivable/payable with a corresponding entry in a decrease in financial derivative assets or liabilities."), which was previously the case for nonrepayable/variation margins. It seems questionable whether the restriction "In organized exchanges and clearing houses,..." represents a clear distinction between the two variants of margins.
In our view, the current text is misleading and contradictory. If the term repayable/nonrepayable margins is to be discontinued, another distinction must be made to distinguish between the different accounting methods.

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **SE-Michael Wolf_Sweden Statistics Sweden**

Factoring

Comments: The description of the economic event is not accurate in the proposal for recording of factoring. The factor creates a relation with a producer or a retailer, but this relation is made after the sales has taken place and does not change the relation between the producer or retailer and their customers. Thus, reclassifying a trade credit into a loan when the factor undertakes the indirect financing is not a correct description of the relation between the involved parties. Instead, a new financial instrument or contingent liability is created between the supplier (producer or retailer) and the factor.

Furthermore, a loan is evidenced by documents that are non-negotiable according to para. 12.78 b. This is obviously not the case between the buyer (customer) and the factor. From a legal point of view the buyers are tied to the payment terms of the goods transaction. It is common that the invoice stipulate that a late payment means that interest and maybe a fee will be charged for the time of delay after the payment is due to be paid. So, it is only after the payment has become due that an interest will be charged and the terms becomes more like a loan. A reclassification of financial instruments is not to be recorded as a transaction. Reclassifications are recorded as other changes in volume (cf. para. 13.68).

To clarify the issue of factoring we propose the following wording of para. 12.87:

12.87 ***Factoring is a transaction in which a factor, which can be a bank, a specialized factoring company, or other financial organization, buys trade accounts receivable from a supplier at a discount***.

Factoring is commonly viewed as a purchase or sale of invoices transferring the legal right of the claim on the debtor to the factor. In factoring, the indirect financing by the factor to the debtor is treated as a loan, after the date the invoice has become due to be paid. The reclassification of the trade credit between the supplier and the buyer to a loan between the factor and the buyer is recorded in the other changes in volume account. The accounts receivable concerned are trade-related receivables arising from the provision of goods, services, or work in progress. There are two basic types of factoring: non-recourse and recourse factoring. In a nonrecourse agreement, the factor assumes the full risk of non-payment by the debtors at maturity and therefore

may charge the supplier a higher fee. In a recourse agreement, all or part of the risk is kept by the supplier. The factor may also keep a reserve that should be paid back to the supplier once the debtor pays its liability in full. The recourse is seen as a guarantee treated as a contingent liability for the supplier, which should therefore not be recorded unless and until being activated by the factor. The factoring income is treated as a fee paid by the supplier; see paragraph 7.xxx. The reserve held by a factor is classified as a deposit, a loan, or other accounts receivable/payable, following the recording of other cash collaterals (e.g., repayable margins for financial derivatives).

- **Celestino Giron_ECB**

In 12.65 **unallocated gold accounts** are said to be classified as deposits on the liability side while 12.45 says that they should be classified as monetary gold if held by the central bank (and also classified as reserve assets). This is an obvious inconsistency.

Moreover and as a result of this, the instrument classification of unallocated gold accounts as an asset depends on its functional classification. We believe that should never be the case and that the instrument and functional classification should be totally orthogonal (this is actually the only case where this happens).

We suggest that unallocated gold accounts are always classified as deposits. They should also be classified as reserve assets if held by the central bank, but without affecting their instrument classification as deposits.

12.81 The reference to margin calls being classified as loans is not in line with the recommendations on cash collateral. Unfortunately, there has not been any discussion on the treatment of margin calls during the 2025 SNA research phase and it is safer to drop this reference from here.

12.145 is inconsistent with BPM7 5.73 ("Interest accrued should be recorded with the financial asset or liability on which it
accrues, not as other accounts receivable/payable"). The BPM7 formulation, which allows for exception in the case of asset lending, is preferable.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

In 2008 SNA, 11.45 and 11.60 somewhat contradict each other in relation to the treatment of unallocated gold accounts with non-residents, with 11.60 suggesting a treatment as AF.2 (which would create a consistent system) and 11.45 creating an inconsistency in the system by suggesting an AF.11 asset matched by an AF.2 liability. Draft chapter 12 reinforces the inconsistent view in **12.65**. The reasons for choosing such a conceptually inconsistent treatment are not quite clear, instead of opting for the AF.2 option in both assets and liabilities, which does not contradict the quadruple accounting system of the SNA.

12.46 Could the wording of "other investment, currency and deposits" be adapted to SNA instrument names?

12.52 What does "with maintenance of value" mean?

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4 Do you have any other concerns with this chapter?

8 Comments

- **Visawanun Charoensuk Thailand Bank of Thailand Senior Analyst**

Paragraph 12.92 and paragraph 12.94 - Subscription rights as a one of many components of equity and investment fund shares should be mentioned in the first paragraph of equity and investment fund shares session as well to provide the scope of the overview components for compilers. For example, “Ownership of equity in legal entities is usually evidenced by shares, stocks, depository receipts, participations, subscription rights, or similar documents.”.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

Yes, Table 12.1, Table 121.1 (cont), Table 12.2 and Table 12.2 (cont). are not visible.

Tables’ headings are there but no actual tables – perhaps it will be visible in the final version?

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

12.56. The paragraph is too brief, as previous UK comments have made clear. The definition of a stablecoin needs far more clarity. A stablecoin 1:1 backed by a domestic currency should be included. Has there been consideration of a stablecoin backed at a lower ratio, or backed by a combination of domestic currency and other crypto assets, either summing to 1:1 or a lower ratio of backing? The guidance provided here is insufficient for compilers to make clear decisions on which assets count as a stablecoin and needs significant enhancement before it meets need.

None of the financial instruments are shown with their respective financial code instruments such as F2 Deposits, F3 Debt etc. The financial codes are an important reference and avoid the need to spell out the names of individual financial instruments and as such should added in throughout. Chapter 12 codes are used for sectors in Chapter 11

Financial Corporations, e.g. S.121, so it seems strange that they have not been included in Chapter 12.

More clarity is required on how to apply the distinction between Other Account Receivable / Payable versus Loans, see 12.64 and 12.136.

12.70. Unclear why Utility tokens are in Debt Securities rather than *Other Accounts Receivable / Payable rather than Debt Securities since Utility Tokens are providing payment in advance. If utility customer transfers the same amount of money from his bank account automatically each month to his utility account, then presumably this would be treated as Other Accounts Receivable / Payable. Given Utility Tokens are similar in nature to a regular bank transfer more clarity is required on why Utility Tokens have been put into Debt Securities. See below text.*

12.23 refers to the distinction between actual liabilities, provisions and contingent liabilities. However, it does not make clear the recording treatment for provisions created by corporations to cover unexpected events or to cover default by their customers, stating only that standardized guarantees are treated as actual, and not contingent, liabilities and that probabilistic liabilities of this sort are often described as provisions. To avoid confusion, it would be helpful to distinguish in this paragraph provisions under standardized guarantees (treated as actual liabilities) from other types of provisions that are not treated as liabilities under SNA.

See, for example, SNA 2008: “A corporation may set aside funds to cover unexpected events or to cover default by their customers. Such monies may be described as provisions. These are not treated as liabilities in the SNA because they are not the subject of the sort of contract, legal or constructive, associated with a liability. Though financial institutions may regularly write off bad debts, for example, it would not be appropriate to regard the provisions set aside for this as assets of the borrowers.”

12.34 describes ‘implicit financial intermediation services on loans and deposits’ and ‘financial services associated with the acquisition and disposal of financial assets and liabilities in financial markets’. It may be helpful to reference where these concepts are discussed in chapter 7.

12.43 – It may be helpful
to summarise how corporations may present consolidated accounts at the
group level according to international accounting standards and that this is to be avoided under SNA.

12.45 describes unallocated gold as giving title to claim the delivery of gold. As SNA 12.65 makes clear, an unallocated account does not give title to gold. 12.45 is a mistake taken from 2008 SNA.

12.93 – "They may also take the form of equity crypto assets, which are similar to standard equity albeit with a novel technology for being created, allocated, transferred and managed." For how long will this technology be considered novel compared with the lifespan of the SNA? Perhaps another term describing the characteristics of equity crypto assets would be more appropriate.

Para 12.122 : Delete "including derivative crypto assets (i.e., derivative contracts that rely on cryptography and that can be exchanged peer-to-peer even if the underlying asset is not a crypto asset)" from the definition of financial derivatives. This is a niche point and should not be included in the concise definition of a financial derivative. If need be this text could be included at the end of the paragraph as a clarifying point, although what it is trying to convey is unclear.

The UK recommends to emphasising the importance of having information on the currency composition of notional values (see paragraph 24 of the Guidance Note).

The UK Recommends not separating exchange rate changes from other revaluations for FX-instruments (less relevant for SNA).

The UK Recommends including guidance on the recording of novation and portfolio compression (see paragraph 26 of the Guidance Note).

The UK recommends clarifying cases where net recording (i.e., assets minus liabilities) is acceptable.

- **Nicola Massarelli_Eurostat**

Para 12.8: "…Financial claims represent all financial instruments that give rise to an economic asset that has a counterpart liability, including shares and other equity in corporations…". This addition is redundant and may be deleted. "Financial claims" have just been defined in 12.7.

Para 12.105: "…Therefore, in order to distinguish when **non-financial units** acquire instruments such as securities and equities directly …". Why limit to non-financial units? Replace with "investment fund shareholders"?

- **Jorrit Zwijnenburg_OECD**

12.77: Crypto assets that qualify as debt securities have been added as a separate category next to short-term and long-term debt securities. We are wondering whether that would make most sense as they could also concern short- and long-term ones and users may just be interested in this breakdown for the full asset class. In that regard, the breakdown into crypto assets that qualify as debt securities and other debt securities may better be presented as an additional breakdown (which may be considered when the share of debt securities in the form of crypto is relatively large).

Chapter 13: Other changes in assets and liabilities accounts

3 Comments

- **Eli Fenichel_US Yale Univ**

There is a lot of normative language in chapter 13 that is uncharacteristic of (and likely inappropriate for) the SNA.

13.21 – no reference to the sustainable level should used. Rather, the, “If levels of extractions are lower than the regeneration of the underlying asset will increase, while it will decrease if extract exceed regeneration.” Sustainable is going to confuse people.

13.23 – What about the case where groundwater is extracted and used vertically in agricultural production. Here it is certainly an asset, but do vertical integration we never see a market transaction for water?

13.29 – in the example of suspending a fishery, this must imply that the marginal value of fish in situ exceed the value in harvest, therefore the value of the fish stock must grow if such policy is observed. Another, example is a forest is not allowed to be cut, then the value of the first must exceed the value of the timber harvest. It should not be assess a zero value. That would be completely wrong.

13.31 -- “improper agricultural practices.” Whether or not the practice is improper is beside the point. The point is there is soil erosion. The change in value is the same irrespective of whether it was best practices or not.

13.63 and 13.105 – It is important that NPV is based on assuming business as expected. This means that for some natural resources changes are happening. Holding the flow of rents constant often means institutions or natural processes must be changing. This should be pointed out because it is common practice to interpret this condition as holding rents constant.

- **Noemi Frisch _Israel ICBS**

13.26 "Disregarding depletion (see below)"?
13.31 "due to less predictable" Less than what?

- **Celestino Giron_ECB**

13.64 Last sentence is better to read "Subsequent changes in mortality data will affect the liability..." as this is the one and only possible change in value other than transactions to be recorded via volume and not via prices.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Nicola Massarelli_Eurostat**

Para 13.20 uses the criterion of control, responsibility and management, rather than migration, and is therefore inconsistent with the Consolidated list of recommendations.

- **Jorrit Zwijnenburg_OECD**

Yes

- **Celestino Giron_ECB**

13.30 indicates that CAWLM are created via other changes in volume of assets. This is not in line with GN F.18 that indicates that the creation is via transactions (paragraph 36 in the GN).

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

10 Comments

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

Paragraph 13.4 - The heading of the chapter of “Other changes in assets and liabilities accounts” is not consistent with the coverage of the detail in the accounts because not only other changes is mentioned in this chapter but also revaluation changes. Using the other changes as a name of the heading of this chapter might lead to misunderstanding. The heading should be covered both revaluation and other changes in assets and liabilities accounts.

- **Mark de Haan Netherlands**
    - Paragraph 13.66: It is unclear how the following sentence should be understood: “It may also include the impact of settlements that eliminate all further entitlements for part or the whole of entitlements” relates to negotiated and non-negotiated changes. It sounds like a negotiated change that should be classified as a capital transfer. Could an example be given?
    - Paragraph 13.72: It would be useful to explain that this is only the case when the transactor approach is used, and not if the debtor/creditor approach is used. As chapter 37 now also includes the debtor/creditor approach, this distinction is relevant.
- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Jorrit Zwijnenburg_OECD**

13.21: We think it would be better to talk about “the fishing ground” or “fishery” when referring to “the area through which the fish migrate”, also as not all fish migrate. We are also not sure what “encapsulated in the value of the quota” means, as there are all sorts of fish quota’s, i.e., tradeable, non-tradeable, allowable annual catch, permits in perpetuity etc.

13.23: What is the implication of the deletion of the sentence “For virgin forests, gathering firewood is not commercial exploitation, but large-scale harvesting of a virgin forest for timber is and brings the forest into the asset boundary”? Does this imply, in light of treatment of all timber resources as cultivated, that collection of firewood would also give rise to recognition of an asset?

13.32: The text may lead to some confusion as it refers to the use of natural resources under “contracts, leases and licences” whereas elsewhere in the text it is specified that, to avoid double counting, the value of these leases should be included under the natural resource and not under contracts, leases, licences.

- **Lenka Valenta_Germany FSO**

13.21 This paragraph on fish in open seas is not clear, i.e. what is being depleted here (which asset)? Please clarify.

It is not understandable, how the underlying asset (i.e., the geographical area through which the fish migrates) can be associated with the value of the fish quota put in place and how this is supposed to be depleted.

What is the connection of fish quota and natural growth of fish? Fish growth might be unrelated to quota...(there might be other considerations in place like increased environmental protection).

- **Marshall Reinsdorf_ISWGNA Editorial Team**

The last sentence of 13.123 should say "the impact of these holding gains HAS to be reflected in the revaluation of the claim OF the pension fund ON the pension manager..."

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

There seems to be a contradiction in 13.29 suggesting suspending fishing to allow recovery is a movement out of economic activity. While 13.21 would count "levels of extraction are lower than sustainable yields, this is to be recorded as negative depletion" so a temporary suspension would effectively yield negative depletion for the industry in that year.

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

There is some inconsistency in use of non-cultivated and uncultivated. In general, reference is made to “non-cultivated biological resources” (e.g. 5.66, 7.285, etc.) but “uncultivated forest” both of which seem reasonable. But there are a couple of references to “uncultivated biological resources” which should be changed to non-cultivated? For example the heading above 13.20 and 13.20 itself, 11.205.

Para 13.72: the text describes the transactor approach. It should be aligned to chapter 27and also refer to the debtor-creditor approach. Otherwise, better to delete it outright.

- **Jorrit Zwijnenburg_OECD**

13.26 and 13.27 (also 13.63): These paragraphs seem to draw inconsistent conclusions: stranded assets means that the exploitability of resources is reassessed and leads to a downward reappraisal.

13.29: The reference to the “suspension of fishing to ensure the survival of fish stocks” seems incorrect, as this would now be treated as regeneration and, hence, negative depletion; not as OCV.

13.31: “All degradation of land, water resources and other natural assets due to less predictable erosion and other damage to land from deforestation or improper agricultural practices should also be considered as a quality change, and thus recorded in the other changes in the volume of assets and liabilities account.” Deforestation should not be considered as OCV, but as it would usually go hand in hand with depletion of timber resources and forest land, it should be recorded as depletion.

- **Celestino Giron_ECB**

13.39 refers to "allocated gold accounts" where it should refer to "**un**allocated gold accounts".

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4 Do you have any other concerns with this chapter?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Jorrit Zwijnenburg_OECD**

13.21: Reference is made to “the growth of fish” as one of the components of the value of the fish, but it should probably only refer to “the fish” (i.e., the fish that are currently alive and expected to be caught) as it concerns stock measures. Furthermore, we think that it may not be feasible in practice for countries to separate into two elements in case of fish resources, unlike with timber resources where stocks of standing timber are work-in-progress. This could perhaps be added. Furthermore, perhaps this paragraph should simply express that in case that well-developed markets in tradeable long-term fish quota exist, their transactions may be used for valuation of fish resources. However, in the majority of cases, one would resort to the NPV of future resource rents. Please note that both in case of NPV and in case of quota transactions, we obtain a valuation of the combined asset i.e., the existing fish + underlying asset.

13.55: Reference is made to “the effects of acid rain”, but whereas this was an environmental problem in the 1990s, it has been more or less resolved by now, so it may be better to replace with a more current issue.

- **Lenka Valenta_Germany FSO**

13.21 Once the paragraph on uncultivated biological resources yielding once only products like fish in open seas, is clarified (see our comment above), it should be (also) placed / copied in chapter 11, under heading Uncultivated biological resources, after para 11.222.

Chapter 14: Balance sheet

3 Comments

- **Nourah Aljehani Saudi Arabia General authority for statstics**

more details should be included for countries with no balance sheet can compile it effectively.

- **Eli Fenichel_US Yale Univ**

14.62 – also any intermediate services provide by live trees, such as rents for accessing the forest for recreation or contributions to providing drinking water downstream.

14.63 – "Non-cultivated biological resources, water and other natural resources are included in the balance

sheet to the extent that they have been recognized as having economic value that is not included in the value

of the associated land." This seems different than what is in Chapter 13. Also, there is reason to push to disaggregate land.

- **Celestino Giron_ECB**

14.11 it seems strange the reference to the capital account in this chaptel on balance-sheets.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Nicola Massarelli_Eurostat**

Parts of this chapter related to natural assets will have to be modified according to the work of the Natural Capital Task Team and the results of the subsequent AEG consultation. In particular:

Paras 14.51-14.55 on Land: we understand that land improvements (and as a result costs of ownership transfers) may be included in land (hopefully as a separate sub-component. This would make land partly "produced" and, as a result, "depreciable".

The "exclusion of the value of any other natural resources above and below it" (14.51), is also under discussion by the AEG and the OECD EG NC: more specifically the "underlying asset" of some biological resources ("forest land" - see also 14.62 - , "agricultural land") may indeed be included in land (hopefully as a separate sub-component). This would make land partly "depletable".

Paras 14.59-14.63: the text has to be revised to take into account the AEG consultation. The main issue is the probable separation of the underlying asset (agricultural land, forest land, ...) from the value of the biological resources (and probably its classification elsewhere, under land).

Concerning the valuation of the "timber work in progress" (14.62) the draft OECD handbook refers to the use of "stumpage price" to calculate the value of the inventories (to be separated from the value of the underlying asset). This could be added in the text. The valuation of wild fish in open seas is also still under discussion by the OECD EG NC. In our view, the separation of the underlying asset and the biological resources is always needed when using the NPV method: this is relevant also for "agricultural land" (see 14.59 where NPV is mentioned as a possible method).

The draft 2025 SNA text is giving more specific information on only some examples of resources (typically fish and timber) ignoring to provide conceptual general guidance which is relevant to know how to treat "residual resources" (such as water, other, ..). Should these residual resources be better covered?

- **Jorrit Zwijnenburg_OECD**

Yes, the only thing is that certain paragraphs may need to be updated based on final classification of biological resources (in view of the AEG consultation).

- **Lenka Valenta_Germany FSO**

Except for the application of residual value method, recommendation D.4 (para 53) has not been included here or in any other chapter (or not found).

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

13 Comments

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

Section C - 3. Natural resource

“Natural capital” is used in the part of introduction while “Natural resources” is used to mention the detail in section C. These two words are the same meaning. Finally, the same wording and same meaning should be applied for both introduction and Section C.

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

Introduction

Financial assets and liabilities as a part of financial account should be mentioned in the session of introduction as well.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

14.29 as per our response to para 11.191: - the method described fails when the price of the costs of extracting the asset effectively internalise the value of the asset itself. Value accrues to the scarcest asset, as is well known in economics, which in this instance will be the extractive technology (e.g. wind turbines) and hence the residual value is generally biased downwards, leading to the natural resources being under-valued and sending a misleading signal to decision makers that the impact of extraction is less than in reality, suggesting the social optimum rate of extraction exceeds reality. This is clearly not the intent of this change, and the UK advises that this method should be rapidly scrutinised. It would be better to not make this change than for our data to misleadingly lead to over-extraction and consumption of natural resources.

- **Nicola Massarelli_Eurostat**

Para 14.18: "…alternative valuation methods need to be applied to estimate what the prices would be were the assets to be acquired on the market on the date to which the balance sheet relates." This sentence is hard to follow. May the editors find a simpler way to express this concept?

Para 14.39 concerns the costs of ownership transfer. Should "… on non-produced assets (other than land) are …" be changed to "… non-produced assets and natural resources (other than land) …"?

Para 14.67. "For deposits, […]. The amount of principal outstanding includes any bank interest i.e. interest net of and implicit financial services on loans and deposits due but not paid." We suggest a reformulation for clarity. In fact, the implicit financial service is not "due", it is an imputation, not a legal obligation. What will be due is the bank interest, i.e. the interest (SNA definition) minus the FISIM. Here we only refer to deposits, not to loans.

Para 14.73: "The values of loans […]. This amount should include any accrued bank interest that has been earned but not been paid, that is interest minus implicit financial services on loans. It should also include any amount of implicit financial services on loans and deposits (the difference between bank interest and SNA interest) due on the loan that has accrued and not been paid. In some instances, accrued bank interest may be shown under accounts receivable or payable but inclusion in loans is preferred if possible." We suggest a reformulation for clarity. In fact, the implicit financial service is not "due", it is an imputation, not a legal obligation. What will be due is the bank interest, i.e. the interest (SNA definition) minus the FISIM. Here we only refer to loans, not to deposits.

Para 14.100: "Interest due but not paid on other accounts receivable or payable may be included here but, in general, bank interest due but not paid on deposits,..." For consistency with paras 14.67 and 14.73.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

The guidelines are clear, but some additions and new chapter paragraphs relating to important aspects such as valuation may need to be better clarified in terms of the main approaches adopted, i.e. market value, capital service contribution (accumulated and revalued) and value current net value.

Regarding natural resources, the chapter should emphasize the importance for the public sector and the consideration of not only market value (or net present value), but also non-market value. Furthermore, the discussion could include some examples of natural resources that could be useful to better clarify the conceptual aspects. Links between public sector and private sector natural resource elements need to be considered.

- **Jorrit Zwijnenburg_OECD**

14.48: Reference is made to "marketable operating leases, licences to use certain natural resources, permits to undertake specific activities and entitlement to future goods and services on an exclusive basis" as examples of "contracts, leases and licenses", but it is unclear which of these are recognized as assets in their own right and how double counting with the value of natural resources is avoided. This is an issue that pops up at several places in the SNA (see also comment to paragraph 13.32).

- **Lenka Valenta_Germany FSO**

The general concept of "an underlying asset" for natural resources is not clear. For example, which natural resources have underlying asset and which not, or whether all natural resources have an underlying asset or not, or if some underlying assets are implicit, while some explicit like in case of timber and forest land. The issue of existence or possibly non-existence of an underlying asset should be clarified for all types of natural resources including explanations on how exactly one should account for these underlying assets in the SNA (this may among other possibly involve GFCF, depreciation or depletion, OCV, ?).

- **Marshall Reinsdorf_ISWGNA Editorial Team**

15.115 would be clearer if it said, "provisions related to financial assets" and "provisions related to non-financial assets" rather than "financial assets related provisions" and "non-financial assets related provisions." (But if the latter phrasing is retained, drop the s on the end of assets.)

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

15 Comments

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

6. Supplementary items

Sub-levels of supplementary items in both Chapter 14 (Balance sheet) and Chapter 12 (Financial account) should be concluded and displayed in the same sub-levels. For example, non-performing loans and sustainable finance are appeared in the supplementary items in financial account but thery are not mentioned in supplementary items of balance sheet. Likewise, concessional lending, consumer durables and accounting for provisions are not existed to chapter 12 although these items are recorded in the financial assets of financial account.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Mark de Haan Netherlands**

par 14.101 is, we believe, inconsistent with the discussion of emission permits in chapter 27. In chapter 27 it is mentioned that differences between auction value and market value are written off at the time of surrender. This seems to suggest that 'in between' the market value prevails. A practical point, in the case of the EU we will never know if a permit ownership, as reported by a business, was initially given away for free or auctioned. Also for that reason we would recommend to record all ETS permits, obtained for free or purchased, at market value. Anything else is against the main principles of SNA and BPM.

- **Luis Angel Maza _Spain Banco de España**

To facilitate the interpretation and use of the decision tree for Valuing Unlisted Equity (Figure 14.1), it is beneficial to use consistent naming for all methods, ensuring they match the terminology used in the main text. This is particularly important for the method 'Present value/price to earnings ratios'. Specifically, including the term "Present value" would be useful.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

14.67 "Repayable margiTechnical payments in cash related to financial derivatives contracts are included in other deposits." Missing context: …if the debtor's liabilities are included in monetary aggregates' broad money. Otherwise, they are included in accounts receivable/payable or as a loan. (It would be useful to include the scenarios under which repayable margins are to be recorded as accounts payable/receivable or as loans.)

14.73: BPM Chapter 7.44-1 text on resetting the value of loans that have deteriorated due to publicly known events is different from that in the SNA 14.73.

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

§ 14.1 We suggest opening balance sheet and closing balance sheet in analogy with terminology used in row 5 and in analogy with para 14.8
§ 14.3 The reference to the case of finance leasing may be extended to other cases where the legal owner is different from economic owner such as of a PPP or a concession that is not only to the case of a financial lease.
§ 14.9 We suggest to also refer to other capital items which could include natural, human,

social, beside physical/financial capital. These items can be identified separately and analysed in asset account.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Section 2: Since the section describes also liabilities accounts, the title of asset accounts should be adapted

14.21 It is suggested to clarify the difference between face value and nominal value (i.e. accrued interests)

- **Jorrit Zwijnenburg_OECD**

14.3: The description of the recording of the situation “when a natural resource is the subject of a resource lease” is inconsistent with that in paragraph 27.16, where three possible situations regarding the rights to use of a natural resource are described. The second option presented there entails a resource lease and option 3 a splitting of assets. The current paragraph 14.3 lumps 2 and 3 together somehow.

14.58: We recommend to remove the reference to “least-cost alternative”, as the EGNC has come to the conclusion that this is not a valid method for use in a national accounts context due to is reliance on counterfactuals.

14.62: The text seems to suggest that most countries compile the asset value of trees for timber production and similar cultivated resources based on NPV of RRs which is unlikely. Most EU countries apply the so-called ‘stumpage valued method’ and/or value forest land based on some observed market transactions. The last sentence also seems confusing: forest land is the name for the land under forestry activity, so would be equal to the value of the land. For these reasons, we suggest rephrasing to “There exist a variety of methods to value timber resources and/or forest land including stumpage value methods, market transactions in land, and resource rent. It is recommended to clearly distinguish between two distinct assets, which need to be recorded separately under the relevant asset categories: (i) the work-in-progress representing the current stock of standing timber; and (ii) the underlying asset (or forest land) which captures the provisioning services of the asset in generating future timber growth.

- **Celestino Giron_ECB**

14.12 "changes in transactions" is either a tautology or a mistake.

Paragraphs **14.86 to 14.89** describe the possibility of recording of negative equity for limited liability corporations. Such negative asset would fall under the concept "constructive liability" as it would not be based on legal obligations. Therefore the treatment contradicts 4.113 that says that constructive liabilities are generally not recorded in SNA and offers as the only exception the case of standardized guarantees.

14.96 to 14.98 please align breakdowns and terminolofy with chapter 25 (e.g. "option type", "forward type", "credit derivatives").

14.98 please mention that CDS can also flip signs.

14.114 Investment funds cannot be FDI enterprise either.

- **SE-Michael Wolf_Sweden Statistics Sweden**

<u>Valuation of assets in the balance sheet</u>

There seems to be some misunderstandings regarding the use of market prices in the valuation of assets. Produced assets (fixed assets and inventories) are valued according to their replacement costs at the time the balance sheet is made up. In case of assets still in production this corresponds to the market price of newly produced assets. Assets no longer produced are valued according to their estimated written-down current production costs.

Natural resources, non-produced assets and financial assets and liabilities should ideally be valued according to observable market prices or prices in the exchange between unrelated economic agents.

We propose the following wording of para. 14.18 and 14:19:

14.18 Ideally, observable market prices should be used to value assets and liabilities in a balance sheet. It is important though to make a distinction between the initial recognition of assets, and the subsequent valuation of assets. Regarding the initial recognition, i.e., the time at which the asset (or liability) enters the balance sheet, the relevant transaction value, in the case of financial assets adjusted for commissions and fees, should generally be used. For subsequent valuation, if there are no observable market or near-market prices because the items in question have not been produced and sold on the market in the recent past, alternative valuation methods need to be applied to estimate what the prices exclusive of wear and tear would be were newly produced assets to be acquired on the market on the date to which the balance sheet relates. This lack of data is likely to be the case for older non-financial assets.

14.19 For valuing non-financial assets, two basic approaches can be distinguished, the first one based on the market prices in the current period for same kind of assets, and the second one based on the contribution of capital services, including depreciation, to the production process in the remaining service life of the asset. The latter approach is usually approximated by accumulating and revaluing acquisitions less disposals over its lifetime and adjusted for changes such as depreciation. Similar valuation issues may exist in the case of, for example, natural resources, the stocks of which are generally not traded in the market, so any values derived from occasionally traded stocks cannot be used for the valuation of similar assets, also because of the heterogeneity of the resources in question. In these cases, the value on the balance sheet can be approximated by the net present value of future benefits derived from these resources, which represent an alternative way of estimating the capital services to the production process.

Valuation of intellectual property products

Comments: Regarding the problems of valuing international transactions in intellectual property products we think that the issue need a good description. The problems mainly regard IPP originally produced under own account but later sold. The sales value and the value in the capital stock might differ substantially giving rise to a goodwill and/or a marketing asset.

It is common that global enterprise groups acquire corporations or subsidiaries of other enterprise groups located in other economies. The buy-up is not followed by merging enterprises since this isn't legally possible, the restructuring is instead made by transferring part of the assets, notably IPP rights, from the acquired enterprise to a parent in the global enterprise group. This has, in a sense, the same consequences as the sale of an enterprise as described in para. 13.36. The price paid for the company and the value of the assets might not match and the difference should be accounted for as goodwill and/or marketing assets. The acquisition of companies is not observed in statistics but the later transfer of assets is in many cases captured in the BoP. The problem is to verify that the relevant values recorded in the national accounts for fixed assets etc. matches those reported in BoP.

It is important that the written-down replacement cost is appropriately described in the para. 14.26. Any reference to the prices on the second-hand market are making the issue ambiguous, it is not the development of the market prices of second-hand goods that is recorded in the NA. The replacement cost refers to the prices of goods produced in the current period which means the same period as the transfer of second-hand assets is recorded for. Maybe this is best understood in relation to inventories bought in a previous period and used as inputs in the current period.

The most comprehensive description of replacement cost we have noticed in the economic literature is found in Keynes "General theory…", confer second paragraph of the first part of chapter 11, where it is stated:

'Over against the prospective yield of the investment we have the *supply price* of the capital-asset, meaning by this, not the market-price at which an asset of the type in question can actually be purchased in the market, but the price which would just induce a manufacturer newly to produce an additional unit of such assets, *i.e.* what is sometimes called its *replacement cost*.' (note that italics appear in the original text)

In relation to the present value of future benefits in para 14.41 it should be noted that when this method is used it should strongly correlate to the benefits of the unit that has produced the asset on own account, when used in the units' economic activity prior to the sale as a second-hand asset. The reason for this is that it is common that prices of second-hand objects have been influenced by other factors than what's related to the social cost of production. This is sometimes referred to as the market price for lemons and can also be understood as the price influence collectors have on rare second-hand objects. In this sense IPP is rare since it is only owned by one unit at time, under the R&D and copyright laws ruling in most countries. It should also be noted that the holding gains are captured by the changes in production costs or by other words the replacement costs.

We propose the following wording of para. 14.26 and 14.41:

14.26 Most non-financial assets change in value year by year reflecting changes in basic prices or market prices of newly produced goods used as assets. This is revaluation of the gross value according to the replacement cost principle. At the same time, initial acquisition costs are reduced by consumption of fixed capitalconsumption of fixed capital (in the case of fixed assets) or other forms of depreciationdeterioration over the asset's expected lifeThis valuation is sometimes referred to as the "written-down replacement cost". When reliable, this procedure gives a reasonable approximation of what the exchange price would be were the asset produced in the same period it is offered for sale.

14.3614.41 Originals of intellectual property products, such as computer software (including artificial intelligence), data and databases, and entertainment, literary or artistic originals should, according to the replacement cost principle, be entered at the written down value of their initial cost, revalued according to the costs of the current period. Since these products often will have been produced on own account, the initial cost may be estimated by the sum of costs incurred including a return to capital on the fixed assets used in production. If value cannot be established in this way, it may be appropriate to estimate the present value of future returnsbenefits arising from the use of the original in production of the unit that has produced it on own account.

Terminal costs

Comments: As a consequence of our proposal for para's 11.229 and 11.230 para. 14:32 needs to be amended.

We propose the following wording for para. 14.32:

14.2814.32 In principle, fixed assets should be valued at the prices prevailing in the market for assets in the same condition as regards technical specifications and age. In practice, this sort of information is not available in the detail required and recourse must be had to valuation by another method, most commonly the value derived by adding the revaluation element that applied to the asset during the period covered by the balance sheet to the opening balance sheet value (or the time since acquisition for newly acquired assets) and deducting the consumption of fixed capitaldepreciation estimated for the period as well as any other volume changes and the value of disposals. In the case of anticipated terminal costs, these costs should be added under provisions; see also the section on supplementary items below. In calculating the value of consumption of fixed capitaldepreciation, assumptions have to be made about the decline in price of the asset and even where full market information is not available, partial information should be used to check that the assumptions made are consistent with this.

Separation of values for different functions of land

Comments: It might be difficult to separate values for the different functions of land. We propose that the separation mainly should be done between manmade structures and land. In case the ownership of other functions or resources can be traded separately these can also be separated otherwise the land value will include them. It is important that we use the same principles of ownership of natural resources regardless of what kind of resource it is. It should be noted that the right to use is not evidence of ownership of a natural resource.

We propose the following wording for para. 14.51 trough 14.53:

Land

14.4514.51 Land provides the economy with several functions including space to access mineral and energy resources and soil for plantations. In principle, the value of land to be shown under natural resources in the balance sheet is the value of land excluding the value of improvements, which is shown separately under fixed assets, and excluding the value of buildings on the land which is also to be shown separately under fixed assets. The value of any other natural resources above or below land, over which separate legal ownership rights can be established, should also be excluded and recorded under the relevant category. Land is valued at its current price paid by a new owner, excluding the costs of ownership transfer which are treated, by convention, as gross fixed capital formation and part of land improvements and are subject to consumption of fixed capitaldepreciation.

14.4614.52 Because the current market value of land can vary considerably according to its location and the uses for which it is suitable or sanctioned, it is essential to identify the location and use of a specific piece or tract of land and to price it accordingly.

14.4714.53 For land underlying buildings, the market will, in some instances, furnish data directly on the value of the land. More typically, however, such data are not available and a more usual method is to calculate ratios of the value of the site to the value of the structure from valuation appraisals and to deduce the value of land from the replacement cost of the buildings or from the value on the market of the combined land and buildings. When the value of land cannot be separated from the manmade structure including buildings, plantations and vineyards,the composite asset should be classified in the category representing the greater part of its value. Similarly, if the value of the land improvements (which include site clearance, preparation for the erection of buildings or planting of crops and costs of ownership transfer) cannot be separated from the value of land in its natural state, the value of the land may be allocated to one category or the other depending on which is assumed to represent the greater part of the value.

4 Do you have any other concerns with this chapter?

6 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Nicola Massarelli_Eurostat**

We assume that the detailed classification of assets, not included in this draft, is still to be finalised. It would be useful to include it in the draft 2025 SNA version that will go to the AEG in October.

We could not check the decision tree for valuing unlisted equity as the image quality was too low.

Chapter 15: Supply and use tables

1 Comment

- **Noemi Frisch _Israel ICBS**

15.84 If the issue is mentioned, the problems could be explained more. Why is it conceptually preferred? How is the current treatment different?

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mark de Haan Netherlands**

Paragraph 15.140: The gross trading profits of corporations also includes depreciation (as recorded by the corporations). Adding depreciation leads to a double counting. Should not the net trading profits be used?

Paragraph 15.148: This paragraph explains why not partitioning would be a problem for the IOT, not for the SUT. For the SUT, it would only lead to adding enormous values in the columns for the wholesale and retail traders. The same holds for paragraph 15.149.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Practical guidance on the recording of the "final consumption expenditure of the central bank" would be appreciated, in view of potential confidentiality issue if the concept of final demand for own use is an exception for the central bank and a new category is created under final demand for this purpose.

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Para 15.15: for precision, in the equation, on the right hand side, it should be "final consumption <u>expenditure</u>".

Para 15.15: the addition “The components of the “income approach” are also shown in the composition of GVA.” is not clear and may need further elaboration.

Para 15.112: It is confusing that GFCF is not listed anymore as one element of GCF, given that the next headline is again GFCF (para 15.113). There is now a mismatch between 15.112 and the following parts.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

---

4 Do you have any other concerns with this chapter?

6 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Paragraph 15.15 suggests including a description of the components of GDP by the income approach in the chapter. This will provide a more complete view of how the income components are broken down and analysed in the calculation of GDP.

Paragraph 15.22 suggests specifying which texts are being referred to. This would help readers identify and consult the relevant sources for a better understanding of the topic.

Paragraph 15.40 recommends expanding the discussion on the production of auxiliary units to clarify whether this production should be classified as non-market production or for own final use. More detailed conceptual guidance could provide a better understanding of how to properly classify these activities based on their nature and purpose.

Paragraph 15.106 recommends clarifying whether a column should be added in the use tables for the final consumption of the Central Bank or whether this should be included under the collective consumption of the government. This clarification will help ensure a correct representation of the data in the tables.

Paragraph 15.114 suggests investigating whether the reclassification of a household car to gross capital formation has been observed in existing surveys, or whether imputations based on indirect indicators should be made for this type of transfer. This could help to establish a more systematic procedure for the classification of these assets.

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

In the composition of SUT tables, it is also practically difficult to create a balance in the supply and use parts, which is related to a number of reasons. Is it also possible to describe them more and offer appropriate solutions around them as well?

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Jorrit Zwijnenburg_OECD**

Table 15.7: In comparison with Table 14.7 of the 2008 SNA, it is important to add a column for central bank final consumption as this unit is now included in final consumption. This means that Table 15.12 would include this column as well.

Table 15.12: In addition to the inclusion of a column for final consumption of the central bank in the Use Table, some errors in the Supply table of the 2008 SNA should also be corrected. The errors concern:

- Row 11, “Public administration (91)”: Column “Total supply (basic prices)” should be equal to 168 which is the number of column (24) “Total economy”. Consequently, column “Total supply at purchasers’ prices” should be equal to 168. In that way, total supply = total use.
- Row 14, “Total”: Because of the errors in row 11, ‘total product’ should be recalculated for these two columns: (a) Total Supply at basic prices should be equal to 4103; (b) Total Supply at purchasers’ prices should be equal to 4236 and therefore equal to total use.

Table 15.14: In addition to the inclusion of a column for final consumption of the central bank, some errors in the 2008 SNA table should also be corrected. The errors concern:

- Row “total use at basic prices”: In column “Households” (30) the sum of product equal to 961 and not to 918, as direct purchases abroad should be included. Consequently, in column “Sub-total final consumption expenditure”, the sum of product I erroneous as well. It should be equal to 1345 instead of 1302. Same problem for the first column “Total use at basic prices” that should be equal to 4103 (like for Supply at BP) instead of 4060.
- Row 14, “Total uses in purchasers’ prices: The first column “Total use at basic prices” that should be equal to 4236 (like in table 15.12) instead of 4193. Not issue for data in column “households” and data “Sub-total final consumption expenditure” that are correct and match with table 15.12.
  - Table 15.15: It would be useful to add a column “Export” after the Gross capital formation block as many countries have re-exports. Alternatively in paragraph 15.184 a sentence could be added to indicate that in the case of re-exports, a column “Exports” should be added after the Gross capital formation block.

Chapter 16: Labour

1 Comment

- **Tatsuya Sekiguchi_Japan NA**

Figure 16.3 Labour market tables framework

This figure does not provide concrete formats for compiling the tables. Is it planned to provide such formats in other chapters or to develop more detailed compilation guidance for the tables?

What is the definition of "Employment subsidies" indicated in the Fig 16.3?

Paragragh 16.82

"hours sought but not worked"

How do you expect compilers to collect or estimate data on "Hours sought by unemployed" in the Fig 16.3? Is it expected to estimate this through multiplying the number of unemployed by average hours worked?

"all other general employee costs borne by the employers, such as training costs, use of recruitment services"

Do these include costs for own-account activities such as labour costs for on the job training?

"payroll taxes"

What is the definition of this term? Does it mean taxes on salary which are not included in the remuneration of employees?

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

10 Comments

- **Hong Dang _Vietnam General Statistics Office**

Yes. I agree with the recommendation for this chapter

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

This chapter has materially improved with useful additional clarifications and amendments, particularly around the employment/unemployment overlap, but suffers from four core remaining issues:

Figure 16.3 and the text continues to omit some important variables (unpaid over-time, unit labour costs which are standard metrics).

Little reference is made to the links and importance of human capital as a more meaningful and integrated measure to the rest of the accounts (while actually some of the labour accounts metrics can more easily be suggested to sit alongside but not in an integrated fashion)

It is hard to understand why productivity is not discussed in this chapter.

Whilst this will be helpful for improving productivity statistics it remains unclear whether it would be helpful for creating labour statistics as labour statistics. That's going to be a tough message to users, particularly if these are called "labour accounts", as these will continue to be produced against the ILO criteria. This therefore raises a communications issue: if a user is looking for our best employment estimates on a residency basis, they shouldn't be going to the "labour accounts" - but there is the potential that they might. Greater explanation should be provided.

- **Karen Kuhn_South Africa RB**

Yes

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

About the guidance on the relationship between the SNA and ICLS and the effort to present transparent comparisons between the two frameworks. We would appreciate a little more clarification in describing the main differences between the two frameworks. The table 16.2 presents a useful synthesis of the relationships between the different concepts, which should be explained more extensively in the text, not only with table footnotes.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

11 Comments

- **Hong Dang _Vietnam General Statistics Office**

Yes, it's. The material in the chapter is clear when it comes to the conceptual guidance provided

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Naomi Kay Australia Australian Bureau of Statistics**

No

- **Nicola Massarelli_Eurostat**

Para 16.96: Add “index” to " such as the Tornqvist index,..."

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Some definitions might be a little reviewed perhaps using the ICLS concepts as building blocks or references. We do not always find correspondence between the terminology used in the paragraphs and that of figure 16.3.

- **Jorrit Zwijnenburg_OECD**

16.73: It is not clear what is meant “annual (full-time) hours actually worked”. Does it mean “annual hours actually worked in full-time jobs”? It would be useful if this could be clarified.

16.97: The paragraph says “... but does not require more detailed data than that needed for the labour market tables framework”, but as paragraph 16.66 and 16.89 only refer to the possibility of including demographic characteristics such as education, etc., this may need to be nuanced a bit or placed in the right context.

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

10 Comments

- **Hong Dang _Vietnam General Statistics Office**

No, there aren't

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

No

- **Naomi Kay Australia Australian Bureau of Statistics**

ABS thinks there are inconsistencies, particularly in Para 16.9 and 16.10. These two paragraphs appear to confuse the labour statistics concepts of labour force, employed and unemployed with the broader concept of labour input within the SNA framework. These concepts should be separated. Suggest that Para 16.10 be changed to “For SNA purposes, the concept of labour input is somewhat broader than the employed definition in 16.9, as it also includes labour which is used as an input into the household production of goods for own final use, some types of volunteer work, as well as unpaid trainee work.”

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

In item 16.17 Employees are defined as "persons who, by agreement, work for a resident institutional unit and receive remuneration for their labour." However, later in the text, it is explained that the category of Employees includes (part of) volunteers and unpaid trainees which by definition do not receive remuneration. We suggest to add a final item (i) in 16.18 " some volunteers (see item 16.32) and unpaid trainee workers although not remunerated ".

---

4 Do you have any other concerns with this chapter?

11 Comments

- **Hong Dang _Vietnam General Statistics Office**

I have a concerns about the definition of labour. In the SNA 2025 draft, the definition of “employment” includes activities for own use as specified under ICLS13. However, the

Statistics Office of Vietnam has now adopted ICLS19 in labor force surveys, where “employment” does not include activities for own use. Therefore, it is recommended that the SNA 2025 considers conducting research to develop terminology that distinctly separates these two concepts.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

In Table 16.1, where is the type of worker related to volunteers working in a recognized institutional unit included? (paragraph 16.34)

- **Sarah La Rosa Belgium National Bank of Belgium**

Relating to The figure 16.2 "Links between the SNA and the 19th and 20th ICLS resolutions", the link between the different types of workers and the categories of the 20th ICLS Resolution can be visually improved, mainly for the form of work 'Employment" of the 19th ICLS Resolution.

- **Sarah La Rosa Belgium National Bank of Belgium**

In the specific issues, we regret the lack of mention of the regional data.

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

It will be better to classify the labour as per ICLS 21. There needs more elaboration with plenty of examples on dependent contractors which is new concept associated in ICLS21.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Topic 2 Quality-adjusted labor input: it would be beneficial to provide a more detailed description of trade qualifications. Additionally, including examples of the quality-adjusted methodology applied to trade qualifications would be advantageous.

It would be greatly appreciated if best practices of compiling labor statistics could be provided, enabling compilers to engage in self-study.

- **Naomi Kay Australia Australian Bureau of Statistics**

Yes – the diagram explaining the labour market tables framework appears to have been sourced from the ABS Labour Accounts publication. If so, we would appreciate the diagram being referenced as being adapted from the Australian labour account (Labour Account Australia methodology, June 2024 | Australian Bureau of Statistics (abs.gov.au)). We consider that this diagram shows the relationships of the labour account quadrants and content, rather than describing a labour market tables framework. ABS will be updating this diagram shortly given underemployment definitional changes.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

We would have liked the revision of the SNA to be an opportunity to align the labour input concepts and definitions with the ICLS standards. Also because the sources, especially supply-side, used to compile data will soon be aligned with ICSE standards and this could cause misclassifications as some terms have quite a different meaning in the two frameworks. For instance the concept of employees in the SNA fits much more the ICSE18 concept of "workers for pay" than that of "employees".

Chapter 17: Capital services

2 Comments

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

The recommendation of using geometric depreciation as the default option for calculating capital stocks and consumption of fixed capital is in contrast with what established by the European Task Force FIXCAP, which recommends to using a convex cohort depreciation function, in accordance with the 2009 OECD Manual Measuring Capital. 2025 SNA should emphasize using a convex cohort depreciation function (geometric depreciation or a combination of age-price and retirement profiles, depending on the availability of information, data and technical capacity).

- **SE-Michael Wolf_Sweden Statistics Sweden**

Comments: Chapter 17 should be moved further back in the SNA. The content of chapter 17 is not in line with the main principles of social accounting that should govern the SNA. This chapter belongs to the extended accounts part of SNA providing links between SNA and other theoretical perspectives.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

yes

- **Jorrit Zwijnenburg_OECD**

Yes

- **Lenka Valenta_Germany FSO**

As regards recommendation D.7 (para 63), guidance on the measurement of capital services for inventories has not been included. No clarifications added on “the rate of return, including clear and consistent guidance on the use of discount rates” (or not identified).

---

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

4 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Jorrit Zwijnenburg_OECD**

17.41: Whereas there is no depreciation of land, it would be good to update the text to explain that land can be depleted.

17.45: It is explained that ‘capital services’ is another term for ‘resource rent’, but given the importance of measuring depletion, it would be important to already explain this much earlier on, also explaining that resource rent is split into a depletion element and an income element. Furthermore, it is referred to as a pitfall here, but that may not be very helpful.

17.59: It would be helpful to also point out that this recording satisfies the requirement that the sum of capital services rendered (1175) is equal to the depreciation (1160) plus income (15).

17.80: The last part of the last sentence (i.e., “which is the relevant variable for aggregation across different asset types”) is a bit confusing. We suggest deleting it, also as aggregation is discussed later on.

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

17.22 - The UK continues to dispute that geometric distributions should be the default. Different assets should have the correct distribution applied consistent with their characteristics. The UK would therefore remove this addition.

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Para 17.3: “…The assets concerned are any produced fixed assets (excluding natural capital), non-produced fixed assets (excluding natural capital), or natural capital assets which are used in an on-going basis on production.” Referring to fixed assets here limits the scope of capital services, e.g. by excluding inventories. Para 4.295 includes inventories and NPNF assets in capital services. The two should be aligned in one direction or the other. The exact scope of capital services may be double checked also in paras 17.5, 17.8, 17.35.

Para 17.23: “By analogy, if the value of the capital services rendered by the asset in year **t=1** is b, Vt+1 = b/(1-df).” Should it be t+1 instead of t=1?

Para 17.29: “…when it is derived as a balancing item in the generation of earned income account?” “Earned” is missing.

Para 17.35: “…regarded as the repayment of **principle** from the element regarded as interest.” Replace “principle” with “principal”.

Para 17.41: If land is non-produced, wouldn’t it be more correct to say that it cannot “deplete” instead of “depreciate”? This also regards para 17.43.

Para 17.45: see comment on paras 11.8, 11.191 etc. on the appropriateness of using "resource rent".

- **Jorrit Zwijnenburg_OECD**

17.47: The paragraph explains that "after allowing for all intermediate costs, labour and the capital services of all nonfinancial assets used in production including any rents paid on the use of non-produced non-financial assets, what is left must represent the resource rent of the natural resource", but this is not correct. The resource rent includes rents paid and provides a value of the unsplit asset. It is only in a subsequent step that we estimate how much the government appropriates of the resource rent (consisting mostly of rent payments) and split the asset.

17.48: This paragraph assumes that the regrowth is statistically observable, which discussion in the EG NC has shown that usually it is not. For that reason, we suggest to delete this.

17.81: This paragraph suggests that one applies a PIM to value mineral and energy resources, while one typically uses the NPV of resource rents where these rents are based on the residual value method. So, we suggest rephrasing.

- **Lenka Valenta_Germany FSO**

17.47 "…*After allowing for all intermediate costs, labour and the capital services of all non-financial assets used in production including <u>any rents paid on the use of non-produced non-financial assets</u>, what is left must represent the resource rent of the natural resource…*".

Not sure that we understand what "rents paid on the use of non-produced non-financial assets" are. Is it here meant "return to other non-produced asset, i.e. those excluding natural capital (i.e. return to AN.2 assets)?

---

4 Do you have any other concerns with this chapter?

5 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Jorrit Zwijnenburg_OECD**

Table 17.4: Replace the label “Consumption of fixed capital” within the table by “Depreciation”.

17.69: We suggest to delete the first line, i.e., “Capital services is just one part of capital measurement in the SNA” as it does not add any guidance and it is disconnected from the rest of the paragraph.

17.85: We recommend removing the part that suggests that it may not be necessary to calculate the wealth stock in volume terms and that this should only be calculated if desired. Many countries have been producing wealth capital stocks by asset type and by industry in both current prices and volume terms for years. These data are also regularly collected by the OECD and Eurostat. In addition, these series of capital stocks in current prices and in volume terms have been used for the purposes of capital services measurement by different international organisations (e.g. EU KLEMS, Eurostat, LA KLEMS).

- **Lenka Valenta_Germany FSO**

17.1 & 17.2 both mention Table on capital services. It might be useful to indicate here that this table is a part of the integrated framework.

Chapter 18: Measuring prices, volumes and productivity

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Jorrit Zwijnenburg_OECD**

Yes

---

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

This chapter discusses the issue of measuring changes in real income. There are strong theoretical arguments (Weitzman, 1976, Sefton and Weale, 2006) that, if real income is intended to be an indicator of well-being, the appropriate deflator for nominal income is the consumption deflator (taking public and private consumption together). The implication is of course that the terms of trade effect extends to investment goods as well as net trade. The logic is that if investment goods become relatively cheaper, less future output should be expected from them. If the consumption measure is used, then the components associated with trade net out over the world economy and the only adjustment which remains is from any change in the price of investment relative to consumption. At the national level the same deflator should be applied to net property income from abroad.

To address this in the chapter it would be necessary to add to 18.197.

“We proceed from here to a discussion of measuring trading gains and losses associated with changes in the terms of trade. We note however that a good case can be made for an alternative approach which focuses on the price index of consumption. That is discussed in section D4 below.

Section D4 (new)

An alternative, and in some ways simpler approach is to use the consumption deflator (taking public and private consumption together) to convert nominal incomes to real values. Weitzman (*Quarterly Journal of Economics*, 1976, Vol 90 pp. 156-162) discusses the use of a measure of real income defined in this way as an indicator of welfare and Sefton and Weale (Review of Economic Studies, 2006, Vol73, pp. 219-249) show that this approach can be extended to address terms of trade issues. The implication is that “terms of trade” effects apply to investment goods as well as to exports and imports; if pricing is efficient and investment goods become cheaper relative to consumption, less future benefit should be expected from them.

If this approach is used the term P in paragraph 18.201 has to refer to the consumption deflator and point a in section 18.207 becomes a Gross domestic product deflated by consumption

plus the trading gain or loss resulting from changes in the terms of trade and investment price effects.

The other elements of the path remain unchanged, but of course with the proviso that the deflator used is the consumption deflator.

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Nicola Massarelli_Eurostat**

Para 18.237: "[...]. In applying the deflated stocks approach, compilers should apply a general price index appropriate for the country and apply the previous year's margin between the effective interest rates and the reference rates to arrive at borrower implicit financial services and depositor implicit financial services in volume terms. [...]". Let's assume that the reference rate and the price index are unchanged but the effective interest rate increases by 1%: this increase should be considered as a price change (in line with ESA 2010). With the original formulation, it would be a volume change. The ESA method rationale is that it is the margin, not the reference rate, which determines FISIM.

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Para 18.131: Guidance Note DZ1, which was endorsed by AEG and made the following recommendation:

Chapter 15 of the SNA covers the issue of measurement of non-market output, but paragraph 15.123 then sounds a note of caution:

"15.123 It is recommended these volume indicators be tested for a substantial period of time with the aid of experts in the domain prior to their incorporation in the national accounts. Expert advice is particularly relevant in the areas of health and education, which usually dominate the provision of individual services. Further, the consequences of the estimates including the implications for productivity measures should be fully assessed before adoption. Unless and until the results of such investigations are satisfactory, it might be advisable to use the second best method, the "input method"."

Given the improvement in data management systems and the demand for more evidence in policy-making, alongside the developments in techniques in this area it seems an appropriate time to revise this paragraph to now read:

"15.123 It is recommended these volume indicators are tested with the aid of experts in the domain prior to their incorporation into the national accounts, and the impacts fully assessed, in line with other revisions.*

It is unclear to us why this endorsed recommendation has not been implemented in the text.

Section 10: It is unclear why no reference is made to monthly estimates. If one is considering quarterly and annual, and this document could be expected to live for another fifteen years, it surely needs this section to be future-proofed by the inclusion of monthly.

Section F: We believe this would fit better in the Labour Accounts chapter.

Para 18.268: PPPs are a valid method for comparisons of consumption-side data when they are derived from purchases data. Work published in Eurona on production-side PPPs are of far more value when considering supply-side issues, such as productivity comparisons. This difference should be highlighted in the text.

- **Poonna Pipatpanukul Thailand Bank of Thailand**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed "Chapter overview", as in chapter 1? It would be useful to ensure consistency across chapters.

Paras 18.40 and 18.51: Correct reference needs to be included: chapter 8 of Quarterly National Accounts Manual (IMF, 2017).

Para 18.155: Correct references to included: "… described in Handbook on prices and volume measures in national accounts (Eurostat, 2016) and Towards measuring the volume of health and education and services (Organisation for Economic Co-operation and Development, 2009)."

- **Jorrit Zwijnenburg_OECD**

18.183: It is stated that "in the case of cultivated natural resources yielding once-only products, the decrease in regenerative potential is recorded as depreciation, while an increase is recorded as fixed capital formation." However, this is incorrect, i.e., it should read depletion and negative depletion. For repeat products it would be a correct description.

18.219: The text seems to imply that digital products only seem to include 'assets that exist only in digital form and services that are supplied over a computer network'. It may be good to clarify that this may also include ICT (or digital) goods.

18.260: We would suggest to delete the reference to "the composition of capital input" in the last sentence. Capital services are constructed as the weighted average growth of capital stocks of different assets, using the share of the user costs of capital of each asset type in total user costs as weights. Therefore, capital services do account for the composition of capital.

---

4 Do you have any other concerns with this chapter?

6 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Para 18.25: presenting a graph of the Laspeyres and Paasche index gap would facilitate a clearer understanding of the comparison.

Topic 3 Chain indices: it would be useful to illustrate best practices and provide a detailed explanation as to why the “over the year technique” is seldom utilized. Additionally, including a sample of chain index calculations would clarify the methodology and assist compilers in practical application.

- **Nicola Massarelli_Eurostat**

Paras 18.180-18.183: the text has to be revised to take into account the results of the AEG consultation There are several issues here.

a) The availability of the estimates of physical stocks (18.180) may be true (in the EU) for certain assets (timber) while this is much more challenging for mineral and non-renewable energy resources.

b) Concerning the definition of depletion (18.181 and 18.182) as "decrease in stock" due to "extractions", this does not fit well with land: can we speak of “stock of land” and “extraction of land”?

c) The price of the natural resource in situ is applicable for some NR: timber and maybe mineral and non-renewable energy but not for others?

d) There is a probably confusion here (18.182 and 18.183) between the underlying object and the biological resources: for example it is said that "regeneration" (negative and positive) in cultivated natural resources yielding once-only product is to be recorded as depreciation and fixed capital formation, but this cannot be. Once the separation done between the underlying object and the biological resources, the "extractions of the biological resources" have to be recorded as changes in inventories, while the regeneration (negative and positive) of the underlying object (either forest land or agricultural land) cannot be recorded as depreciation/FCF, unless the underlying object is classified as "produced" (which sounds weird).

- **Jorrit Zwijnenburg_OECD**

18.85: In the last sentence, please replace the reference to a more recent edition of the manual released in 2014.

18.262: It would be useful to also refer to the Törnqvist index. It is widely used by national statistics institutes and international organisations to compile aggregate measures of capital services and also referred to in the OECD Manual Measuring Capital (2009) (see p152).

18.263: In order to correct a mistake in the definition of multifactor productivity and to align with paragraph 18.264, we suggest replacing "… is that it includes effects not included in the labour and capital inputs" by "… is that it includes the combined effect of using labour and capital inputs".

18.264: Please delete the sentence "It is, however, an indicator of an industry's capacity to contribute to economy wide growth of income per unit of input". The sentence is disconnected from the rest of the text as it refers to how industry productivity relates to the total economy, while the whole paragraph is about the definition of capital-labour (value added based) MFP, independently of whether this is computed for one single industry or for the total economy.

Chapter 19: Summarizing, integrating and balancing the accounts

1 Comment

- **Noemi Frisch _Israel ICBS**

The chapter Appears twice – once before 17 and after 18
19.5 should be table 19.1 not 17.1
19.22 In "because it requires quite different data sources and understanding of the data sources, this account is not always compiled by national accountants" the words "and understanding of the data sources" could be omitted.
"Just as the national accountant must have an understanding of the balance of payments system and ensure that the transactions relating to the rest of the world are fully captured in
the accounts, so there is a need to have an understanding of monetary and financial statistics"
Could also be omitted. Seems a bit strange to assume that the missing items are not captured due to lack of understanding.

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

---

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

4 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

4 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

Some of the terms used are not consistent with the terminology found in chapter 21. We suggest to review all chapters to ensure that the changes to specific terms have been incorporated, for instance, "expenditures" instead of "uses" and "revenues" instead of "resources".

The table referred to in paragraph 19.5 should be 19.1 instead of 17.1.

---

4 Do you have any other concerns with this chapter?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Include example tables throughout the chapter: It is recommended that the example tables mentioned throughout the chapter be made visible. This will facilitate understanding and following the logic presented in the paragraphs describing the missing tables, improving the clarity of the content.

Discuss the need for information for accounts by institutional sector (paragraphs 19.6-19.22): It is suggested that paragraphs 19.6-19.22 include a discussion on the need or not to have information broken down for each account according to the different institutional sectors. This will allow a better understanding of the importance of sectoral data in the construction of national accounts.

Expand the discussion on the reconciliation between the financial account and the capital account (paragraphs 19.18-19.22): It is recommended that the discussion on the reconciliation of the financial account and the capital account be expanded, especially in relation to the lending capacity/need indicator. Specifically, it is suggested to address in more detail the treatment of discrepancies between these indicators, improving the procedures to eliminate discrepancies in accounts that are often prepared by different entities and sources.

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Lenka Valenta_Germany FSO**

19.3 From the user and communication perspective and in line with para 21.80 in Ch21, this chapter should not use the expression “a table”, when describing “an account”, i.e. something, which has a balancing item.

For example, it is rather a right/left hand side of an account (although an account is presented in the Table No. x.x). Also, T-Accounts should not be preferably described as “tables”.

Chapter 20: Elaborating the accounts

2 Comments

- **Tatsuya Sekiguchi_Japan NA**

Paragragh 20.27,

As for the central bank's final consumption expenditure, since it is difficult to obtain sufficient data in the quarterly flash report, is it acceptable to publish it in aggregate with government final consumption expenditure, etc., instead of tabulating it independently ?

- **Marshall Reinsdorf_ISWGNA Editorial Team**

20.134 is not clear. The first sentence should say, "The elements of nominal interest compensating for inflation ..."

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

No

---

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

As per our previous UK response, this Chapter feels out of place in the SNA and it would be best to sit outside as a separate document.

It still covers a lot of material but only on a cursory level, which is best left to more detailed manuals or guidance. By bringing this into the SNA, the **SNA becomes unnecessarily longer**, while repeating information that is found elsewhere. Point 20.6 sums it up nicely and makes the case for this Chapter to be removed. E.g. "20.6 To explain all of the topics covered in this chapter in detail would require far more extensive discussion than is appropriate for the SNA, particularly detail regarding practical compilation issues. Accordingly, this chapter provides summary information with references, where appropriate, to manuals and compilation guidance where more detail can be found."

- **Marshall Reinsdorf_ISWGNA Editorial Team**

Paragraphs 20.133-134 are not clear. The following edits will improve their clarity:

In 20.133, insert "decline in" before "real value of the principal" in the sentence that says: This means that nominal interest, under these circumstances, can include a compon ent which may be viewed as an anticipated reimbursement/refund of the real value of the principal of the financial liability/asset.

In 20.134, change "the element of compensation for inflation should not be considered as a return to capital by the lender and a current cost by the borrower. The SNA treats these components of explicit or implicit indexation" to "The compensation for inflation should not be considered a real return to capital by the lender and a real current cost by the borrower. However, the SNA treats these components reflecting explicit or implicit indexation ..."

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Point 20.25 still seems to be dismissive on any quality impact on the quarterly estimates with the modelling and extrapolation approaches being advocated. This point should be more balanced and highlight quality as an outcome of any extrapolation and interpolation.

Point 20.46 should be reworded further as a minimum of three years are required to ensure the seasonal pattern is stable. The paragraph is incorrect in its current framing, as seasonal adjustment processing can produce accurate results when seasonal component is fast-evolving (parameters need to be adjusted accordingly). To say they are not accurate in that case is rather broad brush and definitive. It could be true for unstable seasonal components, but fast-evolving patterns can be accommodated.

---

4 Do you have any other concerns with this chapter?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 20. It is suggested that discussion and/or recommendations be included on the integration of the System of Environmental and Economic Accounting (SEEA) with the regional accounts.

Chapter 20. It is recommended that advanced predictive techniques be used to improve the accuracy of the quarterly accounts. This will help reduce possible misinterpretations due to the lower accuracy compared to the annual accounts. It is also important to ensure that there is coherence between the quarterly and annual accounts. This will allow a more precise and consistent interpretation of the economic data over time.

Chapter 20. Regional data could be included in the economic analysis to obtain a more detailed and complete view. Regional differences in prices and wages, influenced by factors such as migration and labour supply, can have a significant impact on economic indicators.

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

As a minor point, this chapter could mention that some NSIs are also working on quarterly SEEA accounts as well as SNA.

Chapter 21: Communicating and Disseminating Macroeconomic Statistics

2 Comments

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Chapter 21 is very clear and we agree on the recommendations, in particular on the proposal to simplify the terminology used.

- **Noemi Frisch _Israel ICBS**

21.8 "(e.g., from printed releases to the use of social media)" could be changed to: (e.g., from printed releases on paper to distribution in various forms on internet sites, including the use of social media). Or par. 21.11 could be moved and appear right after 21.8, since it explains the same issue.
21.11 " With new technologies, the publishing capability should support digital dissemination. This will require setting appropriate standards and policies; support for mobile devices without undermining conventional release modes;.. " This sentence could be changed. The technologies are not so new now, and some standards are already in place.
1. Other changes reflected within the [2025 SNA]/[BPM7]
The sentence "This section is likely to appear in one of the Annexes to the 2025 SNA and BPM7 and not in this chapter as appropriate" is not so clear – why is it not an annex now? Is the section not final?

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

5 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

No

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

4 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Jorrit Zwijnenburg_OECD**

Box 21.4: It is not fully clear how this terminology links to what is presented in Figure 2.1, i.e., does Figure 2.1 also include supplementary accounts.

21.88: How do the "other additional tables" link to the overview presented in Box 21.4. Would this be an additional category?

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

The UK continues to consider this chapter to be out of place within the SNA document and recommends it being a standalone set of guidance outside of the formal framework of the SNA25 and BPM7. There it can present best practice and draw on country experiences with practical and illustrative examples. It would also give greater flexibility to update this topic outside of the SNA revision process.

The UK still has serious reservations on the inclusion of section G “A framework for measuring alignment with the international macroeconomic statistical standards”. Paragraphs 21.109– 21.114 would be more appropriately located in the wellbeing chapter. Similarly, paragraphs 21.113-end should be included earlier in the document. – possibly Chapter 1.

Specific

Para 21.3 makes the broad case for this chapter, without really justifying why we consider these issues to be issues, or why they rank as important enough to merit this chapter. Given differences in data and compilation methods, the UK questions whether these concerns are the most important.

Para 21.19 – It is unclear if the term “media team” refers to an NSI context or external media. Can that be clarified.

Para 21.20 - still seems ambitious to assert and will depend on the organisational approach.

Para 21.22. Trustworthy seems to be missing as an objective. In the UK there are three pillars: Trustworthiness, Quality and Value.

Para 21.25 - good to see recognition and addition of the focus on SDMX.

Paras 21.94 -21.108 – the UK continues to have fundamental and deep-seated concerns about the potential impact of this section and those countries that are dependent on finance who may find a relatively poor performance may negatively impact their ability to access funds. We strongly recommend the deletion of these paragraphs.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Box 21.4: Thematic accounts such as health, tourism, sport, etc. in Europe do not necessarily operate within the NA framework, although links are frequently strong. Also supplementary accounts such as environmental accounts do not operate within the functional classification used in NA. This should be changed or at least footnoted.

21.86 The paragraph indicates good intentions: "specific unique codes are shown where applicable". **However, while some introduction of codes was observed in some chapters, this is unfortunately not consistently applied at all. Please refer to comments on other chapters. The absence of codes (coupled with inconsistently applied changes in terminology; in chapter 30 a continued mix of GFSM terminology and presentation) impedes the clarity of the text and leads to imprecisions. The codes should consistently accompany the SNA terms. This also ensures that errors in the text are easily spotted.**

Are P for portfolio investment, D for direct investment and F for derivatives really codes that should be inserted in SNA text? Then they have a double use..

21.88 uses abbreviations, rather than codes, this should be avoided in a chapter that covers terminology and its associated codes.

Unfortunately, there is no Annex to the chapter listing all the codes used. This should be inserted (sectors, product transactions, distributive transactions, balancing items, balance sheet - assets, industry, functional classifications, ...).

Table 21.7:

both depreciation (which is now difficult to distinguish from depreciation in business accounts, yet the clear distinction is important for internal and external communication reasons, see comment by Sweden, Michael Wolf) and depletion are "code to be confirmed", so it is not clear what is being consulted on.

For P.51c, it would be a pity to change the code yet again, in absence of any methodological change (code was changed from K.1 to P.51c in the previous update, so we hope that some stability could be achieved.

For depletion, we fail to see the link with P.51; there is no AN.1 link.

Table 21.8a:

As commented previously, we think that it is **unfortunate that use/resource is replaced by expenditure/revenue** - in European countries, we have been using total expenditure/total revenue to describe the European GFS presentation since 2000. In

COFOG, a similar notion than total expenditure is used by countries, including those outside Europe. The mess this causes can be observed inter alia in chapter 30, please refer to our comments there.

Additionally, the term "income and expenditure accounts" for the accounts above the capital account creates further confusion with the new concepts for the side of the non-financial accounts.

The term "net social contributions" was new in 2008 SNA, even in 2008 SNA, it is not consistently applied, but it was warranted by methodological change, and now yet a new term was proposed, in absence of methodological change. Given that the terms are not consistently applied, this does not improve clarity and the cost of changing should not be underestimated in comparison to rather small potential benefits.

The naming of transfer income account is not applied in any way consistently within chapter 21 and across other chapters - but in most cases it is changed from its old name....

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Para 21.65 vs Box 21.2: the text refers to “comprehensive revision”, while Box 21.2 refers to “comprehensive update”. One formulation should be chosen for both.

- **Lenka Valenta_Germany FSO**

21.77 - 21.78 + Box 21.4 – considering the integrated framework, the product taxonomy includes only the sequence of economic accounts. “Other parts of the integrated framework”: SUTs, Labour market tables, capital service table, FWTW tables, data in tables classified using functional classification, accounts in volume terms, ... are missing (see Ch3).

It is not clear where these tables & accounts belong under the taxonomy given in Box 21.4, as they do not fit to any category in this Box 21.4, i.e., the Box 21.4 should be completed to clearly show where all these above mentioned tables/accounts belong (in the taxonomy of products within the overall framework).

In addition, we wonder where household distributional accounts (accounts for the distribution of household income, consumption and wealth) belong in Box 21.4, under thematic accounts, as in Ch38? In any case, they should be included in an appropriate section in the Box 21.4.

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4 Do you have any other concerns with this chapter?

6 Comments

- **Karen Kuhn_South Africa RB**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Laura Wahrig _Eurostat**

yes, please see our comments under question 3.

- **Nicola Massarelli_Eurostat**

Table 21.7: NDP is defined as GDP-Depreciation-Depletion. Is it envisaged to have another net measure according to the 2008 SNA definition, i.e. GDP-Depreciation? Some users could want it!

- **Jorrit Zwijnenburg_OECD**

21.80: The definition of accounts may differ from how the SEEA is looking up accounts, as many SEEA accounts do not have balancing items.

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

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4. Do you have any other concerns with this chapter?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

Chapter 22: Digitalisation

4 Comments

- **José Bayoán Santiago Calderón USA Bureau of Economic Analysis**

22.23: The text should be consistent in the way it refers to data and databases without limiting the definitions to the subset of data assets or database assets. Rather than referring to database assets, I would suggest replacing with databases to make it consistent with data.

22.23-22.25: It suggests an inconsistency by 22.23 mentioning that the DBMS is not included in databases (under software) and that databases do not include the underlying data. In 22.24, it mentions examples of the valuation of data being embedded in other fixed asset IPPs which would suggest that that should be treatment for database assets. 22.25 somewhat bridges the two and tries to clarify the treatment but seems like rewording the text would make it clearer from the start.

22.26: The costs for data assets include the tasks of recording strategy, collection/record, but also the cleaning, storage, and organizing (e.g., database portion of the data and databases).

22.30: Would be good to include the full criteria for assets in addition to the service life the continuous/repeatedly use.

22.36: Would this mean that value of data could potentially be embedded in Computer Software, including Artificial Intelligence Systems? I imagine this change may have significant revisions to own account software and may require changes in the methodology to capture those.

Might be good to make note of the proposed compilation manual since other sections that have related compilation manuals make reference to those.

- **Russell Krueger _United States IMF Retired**

Substantial comments (entitled 'Comments on Chapter 22 Digitalization') have been sent directly to the UN at sna@un.org. The comments emphasize the role of digital financial instruments as counterparts to underlying nonfinancial goods and services.

- **Tatsuya Sekiguchi_Japan NA**

paragraph: 22.85

Chapter 22 (paragraph: 22.85) provides three categories on the typology of fungible crypto assets: (1) those designed to act as a general medium of exchange (which are further divided in those with, and those without, a corresponding liability); (2) those designed to act as a medium of exchange within a platform or network (again divided into those with, and those without, a corresponding liability); and (3) security crypto assets.

The typology of fungible crypto assets mentioned above, especially for (1) and (2), should be reconsidered. The merge of those two categories would be an idea. For the sake of statistical continuity and stability, statistical classifications based on generality or its coverage of the crypto asset as a medium of exchange should be avoided as there is a possibility that the future technologies may create new types of crypto assets which have a capacity of increased interoperability with different platforms.

- **sna comments received by email**

From

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

5 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

There have been many small improvements on measurement issues for the Digital Economy. However, some of the big issues we flagged before – particularly around crypto and NFTs – remain. Given the required survey developments, additional resources and measurement issues associated with digital economic activity (for example, cognitive testing of survey questions, identifying DIPS, and the challenges of measuring service related activities highlighted by Bean and Coyle) it would be useful to include greater detail on the policy context of producing, for example Digital Supply and Use Tables. For example, the UK's Department of Science, Innovation and Technology have initiated a sizeable body of work aimed at identifying the most appropriate definition of the digital economy, the demography of the digital economy and the role of data in productivity.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mark de Haan Netherlands**
    - 22.14 I wonder if it is necessary to identify FaaS and BPaaS separately, considering they are essentially specific subcategories of PaaS. Including their definitions might raise confusion for readers while not adding much substance to the explanation of cloud services.
    - For section 'Data assets' it would be helpful to refer to the forthcoming handbook which is being worked on in the joint Eurostat-IMF task team on measuring data as an asset.
    - 22.36 I think it would be valuable if this section included some elaboration on the distinction between data used to train AI software on one hand and the more general 'data and databases' asset on the other hand.
    - 22.52 In writing, the explanation of the treatment of different cross-border transactions in digital intermediation services is rather difficult to follow. It might be helpful to add a visualization for the various re-routing scenarios.
    - 22.55 This section highlights some of the (compilation) challenges associated with the rise of digital intermediary platforms. Should the SNA provide insights or suggestions on how these challenges can be tackled?
    - For section 'Measuring quality change in ICT goods and goods with ICT components' there seems to be a lot of overlap with the previous sections 22.91, 22.92 and 22.93. Perhaps these paragraphs could be merged by incorporating the key points of 22.95 and 22.96 into 22.91-22.93.
- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

- For clarity, we suggest to rephrase paragraph 22.53 to: “Domestically produced digital intermediation services used to facilitate an import of good or service should conceptually be treated as an export of services and the value of the imported good or service should be measured by price paid by its domestic buyer.”

- To increase the clarity of the conceptual guidance, it would be helpful if further elaboration or specific examples could be provided for the following:
(a) For paragraphs 22.30 and 22.31, it would be appreciated if further guidance can be provided on how compilers should determine whether the “service life” of a particular type of data exceeds 1 year. The example provided for short-lived data (i.e. behavioral data used for targeted advertising) may still have value after 1 year.

(b) For paragraph 22.40, we note that cross-border transactions for NFTs that convey no ownership rights and only allow for personal use are to be recorded in the relevant services category depending on the content of the related assets. Some examples of such NFTs and the corresponding services category would be appreciated.

- **Rosie Maslin_UK Government Response**

The chapter's content often feels hypothetical, which presents a risk of inconsistency between countries. This may be necessary given the status of the topic, but inclusion of more examples, decision trees and templates would be helpful if possible.

The section on AI does not mention or explain AI services.

- **Nicola Massarelli_Eurostat**

Para 22.29: “… this treatment should not be taken to imply that permission to collect a subject’s license data confers access to a non-produced, nonfinancial asset, as specified in the definition of a rent in paragraph 8.17”. This text is not clear. It should be reviewed to improve clarity.

- **Jorrit Zwijnenburg_OECD**

22.6: To avoid confusion, we suggest to rephrase the first sentence into E-commerce transactions are equivalent to digitally ordered transactions.

22.24: Does the last step also concern the use to tune advertisement to specific (groups of) users and use of data as input to develop or train AI? It is currently only referring to extracting insights and knowledge.

22.44: Reference is made to the fact that platform differ from other producers operating digitally". However, the latter are not defined anywhere in the text, so this may lead to some confusion. A solution could be to add a definition or to refer to the Handbook on Digital SUTs where people can find more information.

22.48: We suggest adding that fees can be explicit or implicit, i.e., "the output of a DIP consists of digital intermediation services, which are recompensed through an explicit or implicit fee."

22.49: We suggest to add that the case discussed here is that of explicit fees (which would also nicely link to the next paragraph, i.e., 'Handling the case when the platform's fee is implicitly included in the price of the intermediated product…'), i.e., "Nonfinancial DIPs often charge implicit fees by accepting buyers' payments for the goods and services produced or sold by platform users and deducting their intermediation service fee from the amount passed through to the producer/seller."

22.83: Medium of exchange is defined as a means for acquiring nonfinancial assets (goods, merchandise equipment, etc.), services, and financial assets without resorting to barter. The reference to 'nonfinancial assets' may be somewhat confusing as not all goods that may be purchased with crypto are assets. It may be better to talk about "goods (including nonfinancial assets), services and financial assets".

22.112-22.113: It may be considered to add a reference to the Digital SUTs handbook where people can find more information on the definition of these categories.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

Since digitally delivered transactions can only be applied for services and not goods, we suggest editing paragraph 22.5 to: "… Digital transactions include digitally ordered (both goods and services) and digitally delivered transactions (services only)."

- **Rosie Maslin_UK Government Response**

Data Assets: Some of the language used here could be revisited and firmed up given the recommendations of the Task Team on Data as an Asset. For example, the task team is likely to recommend that for practical reasons all data will likely be used in production for more than 1 year and we are likely to only record own-account production. It could also provide links to or reference the Data Assets guidelines when these become available.

None of the financial instruments described in Chapter 22 are shown with their respective financial code instruments such as F2 Deposits, F3 Debt etc.

The financial codes are an important reference and avoid the need to spell out the names of individual financial instruments, the financial codes should be added in throughout.

There is a lack of clear principles and definitions in the chapter. For example the "definitions" of data industries and products in SNA 22.7 and 22.9 are essentially tautologies: "digital industries include producers of goods that enable digitalization," (22.7); "digital products either enable digitalization or are enabled by digital technology and infrastructure." But digitalization itself is defined as being enabled by digital technology - "application of digital technology is referred to as digitalization" (22.1). It as though the text is saying the compiler will recognise digital industries and products when they see them.

More definitive wording is recommended for paragraphs 22.78 and 22.79

Paragraph 22.13 describes cloud computing, but it is not defined; for instance, a definition would emphasise the separation of the use of data storage facility from the management of that data storage facility, resulting in greater specialisation. Such a definition could lead to a discussion of recording either fees for the service or a financial lease (SNA 22.16), depending on the criteria to apply.

Paragraph 22.22 under data assets states that "digitized information that does not provide a direct economic benefit to its owner ….is excluded." "Digitised information" is not defined – if the authors mean "data assets" they should say so. It is unclear what a "direct economic benefit" is – an asset is defined in SNA Chapter 4.5 and can be cross-referenced.

It would be helpful to compilers to explain the relationship between "data storage" used in reference to cloud computing services (SNA 22.13) and "databases" used in reference to data assets (SNA 22.23). For instance, if a consumer of cloud computing services stores data in a standard set of files provided by the cloud computer owner such that "to permit resource effective access and analysis" (22.23), is the database owned by the cloud computer owner providing data storage cloud computing services, or the consumer?

Paragraph 22.24 states "the cost of acquiring data used only once ….may be included in the value of intellectual property product." Further gudiance on what circumstances would be "may be" or may be not would be useful.

The section on AI does not mention or explain AI services. SNA 22.35, first sentence, states, "the transformative impact of AI calls for the provision of granular data" – what granular data? The paragraph goes on to state that "separate reporting of AI is encouraged as an "of which" item." To whom is the reporting? Is this item the granular data the first sentence calls for? How would an of-which item for AI assets inform analysis of labour markets, the purpose set out on the first sentence of the paragraph?

The term "data services" are used often in SNA Chapter 22 without being defined, although 22.10 has the statement that "data services include the ICT products that are services"

22.86: The definition of a stablecoin needs far more clarity. A stablecoin 1:1 backed by a domestic currency should be included, but what about a stablecoin backed at a lower ratio, or backed by a combination of domestic currency and other crypto-assets, either summing to 1:1 or a lower ratio of backing? The guidance provided here is insufficient for compilers to make clear decisions on which assets count as a stablecoin and needs significant enhancement before it meets need.

22.86: Further guidance on the difference between Payment Tokens sound like the Utility Tokens is required.

Further guidance would be helpful on the difference between Stablecoins and ABS along with the risks given the role of ABS in the Global Financial Crisis. See below:

Stablecoins sound like Asset Backed Securities: *Stablecoins aim to maintain a stable value relative to a specified asset such as a fiat currency or gold, or a specified basket of assets, usually by being backed (or, at least, advertised as backed) by the assets of the issuer.*

Similarly, Asset-backed securities (ABS) are a type of financial investment that is collateralized by an underlying pool of assets—usually ones that generate a cash flow from debt, such as loans, leases, credit card balances, or receivables. ABS takes the form of a bond or note, paying income at a fixed rate for a set amount of time, until maturity. For income-oriented investors, asset-backed securities can be an alternative to other debt instruments, like corporate bonds or bond funds.Asset-backed securities (ABSs) are financial securities backed by income-generating assets such as credit card receivables, home equity loans, student loans, and auto loans.ABSs are created when a company sells its loans or other debts to an issuer, a financial institution that then packages them into a portfolio to sell to investors. Pooling assets into an ABS is a process called securitization. ABSs appeal to income-oriented investors, as they pay a steady stream of interest, like bonds.

Mortgage-backed securities (MBSs) and collateralized debt obligations (CDOs) can be considered types of ABS.

A collateralized debt obligation (CDO) is a complex structured finance product that is backed by a pool of loans and other assets and sold to institutional investors. A CDO is a particular type of derivative because, as its name implies, its value is derived from another underlying asset. These assets become collateral if the loan defaults. A collateralized debt obligation is a complex structured finance product that is backed by a pool of loans and other assets. These underlying assets serve as collateral if the loan goes into default. The tranches of CDOs indicate the level of risk in the underlying loans, with senior tranches having the lowest risk. CDOs backed by risky subprime mortgages were one of the causes of the financial crisis between 2007 and 2009. Though risky and not for all investors, CDOs are a viable tool for diversifying risk and creating more liquid capital for investment banks.

22.87 If a crypto asset without a corresponding liability is ever able to gain widespread acceptance as a general medium of exchange, the guidance on its classification may be reconsidered.

Is it worth referencing when the US $ came off the Gold Standard?

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Paras 22.21 – 22.32 provide what could be considered the definitive discussion of the nature and treatment of Data, and should be used as the source for text when Data has been introduced into other chapters, e.g. para 8.172, and paras 11.114 – 11.118.

Chapter 22 helpfully references chapters 11, 12, 13 and 14 regarding CAWLM. It would be useful to add cross-references from those chapters to relevant parts of chapter 22.

- **Jorrit Zwijnenburg_OECD**

22.81: I agree that the funds advanced to project owners on reward-based platforms do not qualify as loans, as the project owner’s obligation to supply the reward is contingent on the successful completion of the project, but should it be recorded as a different type of asset (e.g., option or a form of equity)? Or is it fully a contingent liability? And what happens if the project is successful? Does this lead to the creation of an other accounts payable/receivable? Some more text may be useful here.

22.87: “All types of crypto assets are within the SNA asset boundary.” Is this true? Some types of NFTs are not regarded as an asset, correct? Maybe reference should be made to all fungible crypto assets that are within the asset boundary?

22.98: It is stated that “Normal obsolescence causes the volume of a data asset to decay”. However, should this be ‘value’ instead?

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4 Do you have any other concerns with this chapter?

5 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

22.13: Cloud computing is described but not defined; for instance a definition would emphasise the separation of the use of data storage facility from the management of that data storage facility, resulting in greater specialisation.

- **Russell Krueger _United States IMF Retired**

Comments Chapter 22 Digitalisation

Russell Krueger

The comments below deal only with sections on digital financial instruments and the financial sector (mostly Section D).

Chapter Introduction – I propose a short new paragraph near the top of the chapter saying new digital financial instruments open major new statistical possibilities that deserve specific mention.

“*New ¶22.3* or new *¶22.79*   A wide variety of new digital financial payments methods and instruments have major statistical implications in their roles as financial counterparts to transactions in goods and services or to establish claims on nonfinancial assets. Among major new digital payments systems are central bank digital currencies (CBDCs), stablecoins, tokenized deposits, bitcoin and numerous 'altcoins', instant payments systems (IPS), decentralized depositing and lending facilities (DeFi), and bank credit and debit instruments available digitally, etc.. These and other instruments can potentially be tracked (at various levels of aggregation or anonymization) for information on financial sector activity, on corresponding transactions in goods and services, and financial claims on real assets, etc."

Comment 1 – Central banking boundaries in a digital world

As stated elsewhere in the draft SNA text, central banks have a special status and do not undertake traditional intermediation services, but engage in monetary policy actions and other public functions (financial supervision, operating payments services, etc.). As a consequence, central bank output is measured by the sum of costs, not by estimates of implicit intermediation services.

This treatment is correct with regard to the central bank, but important changes in financial markets are blurring boundaries between traditional central banking and commercial banking and payments systems.[1] Many of the changes are related to digitalization of financial markets in which (1) private bank and nonbank payments platforms seek to take on monetary roles, and (2) central banks respond in part by entering into new digital financial retail activities. As cash use has slumped globally and private payments systems surged, central banks have taken on more retail functions, such as creating CBDCs as a cash alternative, creating near hybrid CBDC-private stablecoin instruments, allying with private enterprise service providers or issuers of crypto financial instruments. The public's perceptions, as well as those of monetary and regulatory authorities, can be uncertain about what is public/central banking or private. Moreover, many providers of money-like services are nonresident. The field is moving very fast and national practices are highly diverse. In this mix, where all the possible IUs end up being classified either as central bank or other remains to be seen – this is a key area to follow to ensure SNA practices keep up with market changes.

Comment 3 – NFTs

Paragraphs 22.39 and 22.42 refer to 3 classes of NFTs, including one class in which the NFT 'conveys full ownership rights'. Thus, they are effectively financial instruments 'distinct' from the underlying asset or product. Is the distinction between such NFTs and a deed solely that the NFT is digital and is recorded in a DLT platform? How do they differ from tokens (which are digital and tradable)? How do they differ from securities? (As an aside, in

Islamic finance, some financial instruments convey ownership to underlying assets – if in a digital forms, are these NFTs, or securities or tokens?)

Would it be productive to have two categories for NFTs; (1) collectables and valuables, and (2) financial NFTs and tokens?

Comment 4 – Reporting gaps: Omissions or Evasions? Digital financial innovations are moving fast, often outrunning regulations and statistical reporting methods. Gaps exist, data collections lag, and errors and omissions can be expected under the best of circumstances. Numerous statistical innovations will be needed. New situations might arise that are not covered in the Chapter 22 guidance or prove misleading.

Moreover, perversely, many digital platforms, instruments, services are illicit in nature and deliberately avoid reporting; many of these are cross-border. There are legitimate public reasons (consumer protection, tax collection, crime prevention, etc.) to monitor this activity – sometimes by following digital trails. Some information on the underground activities might be generated, but could be very difficult to use for statistical purposes. Special surveys might be made, or real side effects might be observable in errors and omissions data, etc. which might allow some imputations to be made.

Addressing the gaps might be suitable material for a Compilation Guide, possibly leading to some modifications of the new SNA standards. It's not too early to begin thinking in such terms.

Comment 5 – Tokens

Paragraph 22.85 discusses 'security crypto assets' that are described as "tokens certifying ownership of a financial instrument. They always have a corresponding liability and should be recorded as debt securities, equity securities, or financial derivatives depending on the nature of the claim on the issuer."

Tokens are tradable digitized instruments providing rights over an underlying asset. They are likely to become one of the most important digitalization developments and must be followed.

First, many financial institutions, central banks, and international financial organizations are actively investigating or implementing various tokenization schemes; thus, their statistical tracking will be critical.

Second, the paragraph should be amended to state that nonfinancial assets can also be tokenized. As tradable instruments, this *potentially* means that virtually any asset (financial or nonfinancial) can be turned into a security or equity – which could have immense economic effects. (Whether this happens is uncertain – regulators and legislators might have something to say about it.)

Third, mobilization of all sorts of assets as tradable tokens could have major effects of financial markets in general and on perceptions of money and value – defining money and developing policy will be a challenge.

Fourth, tokenization might also be mentioned in Chapter 26 (Islamic finance), paragraph 62 on Islamic sukuk securities, which also might develop into tokenized forms.

Parenthetically, in a comment on this same paragraph (22.85), Sekiguchi also endorses the security crypto assets classification described in the draft. However, he argues against a further breakdown of fungible cryptoassets into those as a general medium of exchange against those within a platform or network. He suggests that the distinction might become dated as future technologies could increase interoperability between platforms. I have some sympathy for his argument – there is a high demand for interoperability and easy exchange of digital instruments – technology seems to be going that way. In contrast, there are many *proprietary* coins and platforms that serve individual companies or meet market or regulatory requirements – these can transfer value within boundaries without intent or likelihood of becoming generally usable instruments. Perhaps this description falls between what the draft and Sekiguchi are thinking. (For some statistical implications of proprietary platforms, see comment on paragraph 22.78 above.)

Regardless of these early thoughts here, tokens will be a major focus of innovation and market impact and there will be much to follow. Statistical standards will have to evolve in parallel.

Comments on Section D: Digitization and the Financial System

22.78 Add to end of first sentence "or act as a store of value."

Add to end of second sentence "or one of a wide variety of new electronically transferrable digital financial instruments."

Bravo for the reference in line 4 to a thematic account on the digital economy. It's necessary!

Paragraph 22.78 recommends an *of which* item to denote digital instruments within the major financial instrument categories. CBDCs are specifically mentioned. However, two types of CBDCs exist that have different functions and behaviors; 'retail' CBDCs are a cash equivalent for general public use, and 'wholesale' CBDCs are transferrable assets of the central bank used between central banks and financial institutions. The two instruments behave differently, affect different markets, and a simple comparison between counties of CBDCs classified within a single *of which* line might not be meaningful.

Within the next to last sentence, insert 'decentralized digital depositing and lending platforms (DeFi)'.

In the last sentence, following the words 'crypto assets" insert within the parentheses 'stablecoins, digital tokens, and more'.

At the end of the paragraph, insert the sentence, "Many digital platforms and coins are proprietary and dedicated for use by a specific firm or consortium – for statistical purposes, research will be needed whether the digital operations are secondary to the primary business of the firm or have changed the fundamental nature of the business, whether the operation is spun off as a separate captive institutional unit, if it is internal to the firm or allows access by the firm's customers."

Finally, add that many digital operations can be partially or totally cross-border.

New ¶22.79 The first comment to this note is a draft paragraph that might be inserted either as a new paragraph ¶22.4 or as a new ¶22.79.

Existing ¶22.79 can add to the list at the end, 'Also, tokens are tradable digital financial instruments that convey rights to either financial or nonfinancial assets."

¶22.80 Instant payment systems (IPS) could be operated either by the central bank or as a separate IU classified as a financial auxiliary, which appears to be the option used here.

Other Comments

¶22.23 add a reference to AI discussion in section 3.

[1] See Krueger *CBDCs: Work in Progress* (2024) for more on CBDCs and blurring between CBDCs and other private payments instruments such as stablecoins or tokens,

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

2 Comments

- **Regina Loo _Singapore Department of Statistics**

Yes

- **Celestino Giron_ECB**
  - Crypto assets without liabilities. From the conclusions of the joint AEG/BOPCOM meeting of March 2023 "*The national accounts and balance of payments communities to monitor developments relating to non-liability crypto assets and review the recommendation in case there are significant market, regulatory and/or accounting changes that may justify a revision either before or after the release of the manuals in 2025.*" The recent developments in the crypto asset markets (e.g. creation of bitcoin ETFs, development of crypto lending platforms) make it advisable to reopen the discussion on the classification of bitcoin and similar assets.

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

- For clarity, we suggest to rephrase paragraph 22.53 to: "Domestically produced digital intermediation services used to facilitate an import of good or service should conceptually be treated as an export of services and the value of the imported good or service should be measured by price paid by its domestic buyer."

- To increase the clarity of the conceptual guidance, it would be helpful if further elaboration or specific examples could be provided for the following:
(a) For paragraphs 22.30 and 22.31, it would be appreciated if further guidance can be provided on how compilers should determine whether the "service life" of a particular type of data exceeds 1 year. The example provided for short-lived data (i.e. behavioral data used for targeted advertising) may still have value after 1 year.

(b) For paragraph 22.40, we note that cross-border transactions for NFTs that convey no ownership rights and only allow for personal use are to be recorded in the relevant services category depending on the content of the related assets.

Some examples of such NFTs and the corresponding services category would be appreciated.

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

  Since digitally delivered transactions can only be applied for services and not goods, we suggest editing paragraph 22.5 to: "… Digital transactions include digitally ordered (both goods and services) and digitally delivered transactions (services only)."

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4. Do you have any other concerns with this chapter?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

Chapter 23: Globalisation

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Josef Falkinger _Austria National Accounts**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

8 Comments

- **Mark de Haan Netherlands**

23.12 contains a slightly different definition from merchanting than 33.31. Consider harmonization.

23.12 to 23.20: The treatment of the acquisition of goods as negative exports leads to trade asymmetries with the country that sells the goods as this country will report an export. I would be useful if the SNA would explicitly state that this is a cause for trade asymmetries between countries.23.7 contains a slightly different definition from re-exports than 33.33. Consider harmonization.

23.28 Introduce the acronym FGP here (or earlier) instead of in Figure 23.5 under 2.1.2.2

23.66 Replace "exchange values" by "actual market prices", similar to what was done in 23.58

23.78 – 23.80 Replace "eSUT" by "ESUT" as in the upcoming handbook (see 23.80).

23.78 There are extensions of supply and use tables and what the upcoming handbook on the subject calls extended supply and use tables (ESUTs). Each extended SUT is an extension of a SUT, but not each extension of a SUT is an extended SUT. Only a SUT with firm type breakdowns are considered extended supply and use tables. Suggestions how to adapt the text without too many changes:

- "Extended supply and use tables (eSUTs) are extended tables designed to provide" by "Extensions of supply and use tables are extensions designed to provide"

- Insert after the sentence starting with "Extensions may include details" the following sentence "Extensions of supply and use tables with such breakdowns by firms are called extended supply and use tables (ESUTs)".

23.80 Replace "eSUTs can be found in the OECD Handbook on Extended Supply and Use Tables" by "ESUTs can be found in the Handbook on Extended Supply and Use Tables and Extended Input-Output Tables". The title of the handbook was changed.

Figure 23.7 In the arrow from Country B to Country C, replace "Gross exports" by "Gross exports (110)"

23.107 Footnote 5 refers to the 2021 version of an OECD-document. Better to refer to the 2023 version, as was done in 36.85

23.107 Footnote 5: add that there is a regional version of TiVA accounts for Latin America as well. More information for the SNA team, not necessarily for publication in the SNA itself, can be found in "Economic analysis based on input-output tables: Definitions, indicators and applications for Latin America",
t https://repositorio.cepal.org/server/api/core/bitstreams/bcf53eb1-35e5-49b1-8616-1683b9aefb6d/content

23.109 Replace “worldwide input-output table” a few times by “multi-country input-output table” since this is the term used in Chapter 36 as well.

23.109 Insert a reference to 36.72-36.80 (multi-country tables)

23.111 Replace “eSUTs” by “ESUTs and EIOTs”.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Josef Falkinger _Austria National Accounts**

23.26

The last sentence is inconsistent or at least misleading. It says: “The principal could report merchanting in the case of minor processing (see paragraph [23.12] and the decision tree in Figure [23.1]).” However, 23.12 or and the decision tree do not relate to the special case of minor processing. Minor processing is also not a precise definition. The paragraph would be formulated clearer in the following way:

“The principal could report merchanting **(see paragraph [23.12]** in the case of minor processing **not changing the substance of the good."**

BOX 23.1.

The examples of Global Manufacturing and Distribution Arrangements seems to be inconsistent:

This is because, at the bottom of the Box we are informed that: "* Items marked with an asterisk are recommended to be shown separately as supplementary items for recording global production arrangements of Economy A. (see paragraphs [23.14, 23.22, and 23.29])."

Asterisks are included in example 3, 4 and 5 relating to processing and factoryless goods production. However, they are missing in Example 1 dealing with re-exports. According to 23.10 and 23.11 re-exports and re-imports are also recommended to be shown separately as supplementary item. The reference to 23.14 is misleading because the 23.14 does not say anything about supplementary items.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

- Clarity and nuancing of the Decision tree diagram in Figure 23.1 can be improved, in particular that of the notes at the bottom - Imports and exports of goods (in the form of re-exports) produced outside the economy of the principal can also be considered as merchandise trade and it is therefore unclear why a "No" in Box 1 - "Are the goods produced outside the economy of the principal?" would lead to Box 3 - "Merchandise trade;".

- For the section on merchanting, we note that it may be difficult to account for inverse merchanting in practice. It would be appreciated if there is guidance on possible data sources to identify inverse merchanting as well as the appropriate adjustments to be made if IMTS flows are used as the source.

- For paragraph 23.28, as it is possible that the material inputs are sourced by the principal and subsequently sold to the contractor via merchanting, we suggest not to be too prescriptive on the outsourcing of acquisition of material inputs. Suggested edits are in red:
"A factoryless goods producer is a principal that controls the production of a good by undertaking the entrepreneurial steps and providing the technical specifications required to produce the good, but that fully outsources fully or most of the material transformation process required to produce the output."
"… The factoryless goods producer supplies inputs of intellectual property such as product design, without charging for the right to use the intellectual property, but outsources both the acquisition of all of the material inputs and the manufacturing process to a, usually nonresident, contractor…"

- For clarity, we suggest to show the goods account and services account entries for all economies mentioned in the example in Box 23.1, e.g. under Example 3, other than Economy A, entries should be shown more clearly for Economy B, Economy C and Economy D.

- We suggest amending the footnote for figure 23.3 to clarify that the contractor does not need to have complete ownership of the material inputs. This also ties in with figure 23.1

(box 2) where “No” would mean that the principal does not own most or all the goods as input materials to the production (and conversely, the contractor would own most or all the input materials). The edits are in red:
"There are variations of factoryless goods production. Material inputs may also be sourced from Economy A, Economy B, or Economy D. Furthermore, the principal may source the material inputs and sell them via merchanting to the contractor. The key aspect is that the contractor takes ownership of all or most of the material inputs. Finished goods may also be sold to Economy A, Economy B, or Economy C."

- For figure 23.5, we suggest adding the scenario of factoryless goods producer in the decision tree in scenario 1 in which the unit is part of a multinational enterprise (MNE) so that it is clearer for compilers in distinguishing whether the unit within a MNE structure is a factoryless goods producer.

- **Jorrit Zwijnenburg_OECD**

23.34: Reference is made to the possibility of indirect control. However, it may be better to specify that this would work via ownership of enterprises that have ‘control’ instead of ‘voting power’ as the latter itself may not be sufficient, i.e., only in the case whether this voting power would be over 50%).

23.82: It would be good to clarify the link between AMNE and FATS, i.e., explaining that “FATS are a subset of AMNE and do not cover the affiliate’s ultimate parent enterprise.”

23.87: It is not clear what ‘unrelated persons’ refers to in the last sentence. We think it can be deleted with no loss of meaning.

- **Lenka Valenta_Germany FSO**

23.28: The guidance note on FGPs recommended that FGPs should be classified as manufacturing. The chapter does not include this recommendation.

23.7 - 23.11: Re-arrange the definitions of the arrangements in the sequence of the Figure 23.1 (Global manufacturing and distribution arrangements decision tree), starting with processing.

23.30: Since the use of intellectual property is not charged in an FGP arrangement (see para 23.28), checking the input values of IPPs seems to be impossible in practice. The last sentence is therefore not helpful as a guideline to identify FGPs.

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Josef Falkinger _Austria National Accounts**

See comment on Question 2 Chapter 23

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

It seems that the treatment of FGPs in this chapter, as illustrated in the Decision tree diagram in figure 23.1 , is inconsistent with ISIC Rev. 5. Under ISIC Rev. 5, FGPs can include principals which own the input materials but in figure 23.1 (box 2), such principals are classified under Processing. We suggest to check and align with ISIC treatment standards on this.

- **Rosie Maslin_UK Government Response**

23.7 The definition of Re-exports does not reflect the absence of both owning the inputs and controlling the production process (which is a key aspect in Figure 23.1)

In para 23.21, the simplest case: It would be useful to have import of services mentioned here (and point to para 23.27).

- **Lenka Valenta_Germany FSO**

Figure 23.5 Decision tree for determining economic ownership of an IPP observed in global production: The wording "not as member of an MNE group" is too restrictive. The second part of the decision tree should also apply for situations where units that are part of an MNE group are interacting with units outside their own MNE group (see corrections to para 23.49). For completeness sake, a case 2.2.1.3 could be added where the unit did not produce the IPP, is a producer of other goods/services, and does neither pay royalties nor purchased the IPP. This would reflect the contractor in an FGP arrangement.

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4 Do you have any other concerns with this chapter?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Chapter 23: Consider the possibility of collecting and reporting additional data on Special Purpose Entities (SPEs), especially in cases where such entities play a significant role in the country's economy. This would help more accurately reflect the economic impact of SPEs in national statistics.

Chapter 23: Consider the collection of disaggregated data on trade in goods and services by enterprise characteristics (TEC and STEC). This would include additional information detailing exports and imports of goods and services, as well as external flows of investment income, broken down by ownership, company size, trading partner, product, and industry.

Chapter 23: Evaluate, in cases where Special Purpose Entities (SPEs) are relevant, the voluntary option of extending the sequence of economic accounts through a supplementary presentation that reclassifies these entities, moving them from their legal economies of incorporation to the economies of their parent companies.

- **Josef Falkinger _Austria National Accounts**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

We would like to check if it is possible for firms to engage in both FGP and GFP activities. Currently, the decision tree diagrams seem to suggest that FGP and GFP are mutually exclusive. If they are not mutually exclusive, guidance should be provided for the scenario of firms which engage in both activities.

- **Sarah La Rosa Belgium National Bank of Belgium**

Relating to the Figure 2 "Decision tree for determining economic ownership of an IPP observed in global production - unit is a member of MNE group", it would be useful to also create a case 1.1.3; in concrete terms, this concerns companies within an MNE that provide IPP services on behalf of other entities and that are not themselves main producers of R&D and that do not use the IPP in their own production process. In this case, economic ownership should be assigned to the unit to which the R&D is sold (parent or other entity).

- **Jorrit Zwijnenburg_OECD**

23.79: Reference is made to 'foreign affiliate trade statistics'. However, this is nowadays referred to as 'foreign affiliate statistics'.

23.80: Please use the complete title of the forthcoming OECD handbook, i.e., "the OECD Handbook on Extended Supply and Use Tables and extended Input-Output Tables".

Figure 23.7: It would be helpful to add 110 in the gross exports arrow.

- **Lenka Valenta_Germany FSO**

23.8: It could be helpful to explain goods in transit.

Box 23.1 Examples of global manufacturing and distribution arrangements - Examples 2 and 3: Switch Economy B and C for better understanding.

Table 23.1 Types of SPEs – there is no description for category 1.3 (Holding financial assets for securitization)

- **Celestino Giron_ECB**

In 23.34 or in other part of the SNA tehre is a need to mention and explain the treatment of control of "orphan companies".

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

> - Clarity and nuancing of the Decision tree diagram in Figure 23.1 can be improved, in particular that of the notes at the bottom - Imports and exports of goods (in the form of re-exports) produced outside the economy of the principal can also be considered as merchandise trade and it is therefore unclear why a "No" in Box 1 - "Are the goods produced outside the economy of the principal?" would lead to Box 3 - "Merchandise trade;".
>
> - For the section on merchanting, we note that it may be difficult to account for inverse merchanting in practice. It would be appreciated if there is guidance on possible data sources to identify inverse merchanting as well as the appropriate adjustments to be made if IMTS flows are used as the source.
>
> - For paragraph 23.28, as it is possible that the material inputs are sourced by the principal and subsequently sold to the contractor via merchanting, we suggest not to be too prescriptive on the outsourcing of acquisition of material inputs. Suggested edits are in red:
> "A factoryless goods producer is a principal that controls the production of a good by undertaking the entrepreneurial steps and providing the technical specifications required to produce the good, but that fully outsources fully or most of the material transformation process required to produce the output."
> "… The factoryless goods producer supplies inputs of intellectual property such as product design, without charging for the right to use the intellectual property, but outsources both the acquisition of all of the material inputs and the manufacturing process to a, usually nonresident, contractor…"
>
> - For clarity, we suggest to show the goods account and services account entries

for all economies mentioned in the example in Box 23.1, e.g. under Example 3, other than Economy A, entries should be shown more clearly for Economy B, Economy C and Economy D.

- We suggest amending the footnote for figure 23.3 to clarify that the contractor does not need to have complete ownership of the material inputs. This also ties in with figure 23.1 (box 2) where “No” would mean that the principal does not own most or all the goods as input materials to the production (and conversely, the contractor would own most or all the input materials). The edits are in red: "There are variations of factoryless goods production. Material inputs may also be sourced from Economy A, Economy B, or Economy D. Furthermore, the principal may source the material inputs and sell them via merchanting to the contractor. The key aspect is that the contractor takes ownership of all or most of the material inputs. Finished goods may also be sold to Economy A, Economy B, or Economy C."

- For figure 23.5, we suggest adding the scenario of factoryless goods producer in the decision tree in scenario 1 in which the unit is part of a multinational enterprise (MNE) so that it is clearer for compilers in distinguishing whether the unit within a MNE structure is a factoryless goods producer.

---

3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

It seems that the treatment of FGPs in this chapter, as illustrated in the Decision tree diagram in figure 23.1 , is inconsistent with ISIC Rev. 5. Under ISIC Rev. 5, FGPs can include principals which own the input materials but in figure 23.1 (box 2), such principals are classified under Processing. We suggest to check and align with ISIC treatment standards on this.

---

4. Do you have any other concerns with this chapter?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

We would like to check if it is possible for firms to engage in both FGP and GFP activities. Currently, the decision tree diagrams seem to suggest that FGP and GFP are mutually exclusive. If they are not mutually exclusive, guidance should be provided for the scenario of firms which engage in both activities.

Chapter 24: Insurance and pensions

4 Comments

- **Tringa Cerkini Switzerland Federal Statistical Office**

Paragraph 7.225 refers to Chapter 24 for more details on "certain cases where the formula for life insurance policies may need to be applied". However, Chapter 24 does not provide any information on the measurement of output for these 'certain cases'. We would welcome guidlines for those.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

As regards Chapter 24: Insurance and pensions (OLD Chapter 17) of the draft 2025 SNA, no substantial changes have been introduced, but the consistency and the clarity of the text have been improved.
The only detail that we note is that in par. 24.200 (former par. 17.198 of SNA 2008), rows 7-9, a pre-existing sentence has been retained that looks unnecessary in the light of the text that precedes it, misplaced from the point of view of the logical sequence of the paragraph (its object, column F, is already treated in row 3), and also contains a typo (a parenthesis is opened but not closed), that is
(Column F shows that part of all defined benefit schemes of government that are retained within the government accounts as distinct from being moved into separate units or administeredmanaged for government by another institutional unit.
We propose to simply delete the quoted sentence, so that par. 24.200 becomes more compact and consistent.

- **Benson Sim**

Paragraph 24.30-it may be useful to explain what is "normal profit".

- **Noemi Frisch _Israel ICBS**

24.99 "If participation to a scheme is not obligatory, but only encouraged, it can become more difficult to"   Change to: ” If participation in a scheme is not obligatory, but only encouraged, it can become difficult to"
24.100 not very clear – f.ex. "unless the schemes are collective arrangements which provide policies, for certain industries or professions, with a strong resemblance to similar arrangements organized" – how do arrangements provide policies?
24.119 g "less serviced charges" should be service charges
24.127 could be formulated more short and clearer.

24.135 "Notional defined contribution schemes" – it should be explained, what that is.

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Luis Angel Maza _Spain Banco de España**

We do not agree (paragraph 24.91). The text of the new SNA should incorporate the conclusions of the "Guidance Note" prepared by the TT on this matter. These conclusions were largely endorsed by the AEG under the "Option 3 for Employer-Independent Pensions."

"Option 3: Clarify that autonomous, employer-independent schemes or funds can also qualify as social insurance pensions, and specify the criterion as follows: accumulated contributions are set aside for retirement income and are subject to regulation or supervision in line with or similar to employer-related pension schemes/funds."

Reiterating all the arguments presented during the discussion and the extensive work of the TT would be dysfunctional at this point, as a broad general consensus was reached that allowed us to come to an agreement.

In our opinion, not incorporating the conclusions of the TT and the previous decisions of the AEG would damage the process and the image of the discussion on the update of the new SNA.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Celestino Giron_ECB**

No, the AEG agreement in the context of GN F12 is not correctly reflected. In particular, the wording of paragraphs 24.91 and 24.100 does not ensure that employer-independent *pension* schemes are classified as social insurance under the conditions laid down in the GN. It is particularly detrimental to that objective the references to "designated group of workers" or to self-employed only, which contradict the arguments put forward in paragraph 31 of the GN.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Nicola Massarelli_Eurostat**

Para 24.10: "… one can observe hybrid insurance products that are […]. **These products should be allocated to one category or the other depending on which features are predominant**…" replace the part in bold with "Hybrid insurance products should be classified based on a systematic assessment of their features and incorporating criteria such as the proportion of premiums allocated to claims for insured events versus payouts at maturity.", to give more precise references to compilers.

Para 24.26: "The concept of reserves used in the formula for deriving the value of insurance output corresponds to the definitions (respectively) of non-life insurance technical reserves and life insurance and annuity entitlements." Add the part in red, to avoid any misunderstanding. The current formulation may be interpreted as if different types of insurance may be combined.

Paragraphs 24.42-24.45 could be streamlined. These sentences in paragraph 24.44 do not take into account that reinsurance businesses are usually large MNEs with many cross-border links, which implies a supranational delineation “To avoid this, it is recommended to resolve them on a case by case basis. A strict delineation of catastrophic events would reduce the instances where this might occur. “

Paragraph 24.99 “If participation to a scheme is not obligatory, but only encouraged, it can become more difficult to differentiate between social insurance type of schemes and individual insurance policies. It is clear, however, that insurance policies solely taken out by individuals would not qualify as social insurance, even if, for example, a discount is arranged for a designated group of people, or participants benefit from a tax advantage.” It's important to add the bit in red.

Paragraph 24.119g – typo. it should be “service charged” instead of “service charges”.

Paragraph 24.186 – this sentence “It may also include the impact of settlements that eliminate all further entitlements for part or the whole of entitlements.” should be clarified, as “settlements” could mean different things.

- **Jorrit Zwijnenburg_OECD**

24.135: Reference is made to ‘notional defined contribution schemes’ but the term itself is not explained. Is it expected that most readers will be familiar with this term or may it be useful to specify?

- **Marshall Reinsdorf_ISWGNA Editorial Team**

In 24.163, the sentence is not understandable that says:

The shortfall (or excess) in investment income receivable by the pension fund is treated as an imputed investment income attributable to surplus/shortfall in defined benefit pension funds.

This sentence could say:

The gap between the investment income from the pension plan's accumulated assets and the investment income needed to cover the cost of the unwinding of the pension entitlements is filled by the imputed investment income from the asset representing the claim of the plan on the pension manager.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Joao Fonseca**

Paragraph 24.178 - The last sentence of paragraph 24.178 needs to be consistent with the last sentence of paragraph 24.163. Therefore, we suggest the following changes to the last sentence of paragraph 24.178 in tracked changes:

"As a consequence, the entitlement coming from past service income related to the unwinding of the entitlements is matched by actual receivables of investment income and imputed investment income receivable from the pension manager."

Paragraphs 24.182-24.183 - The numerical example has incorrections. Please see numerical example below with the correct numbers (2008 SNA Table 17.8: Accounts for pension benefits payable under defined benefit scheme [corrected]). The numbers in paragraphs 24.182 and 24.183 need to be corrected as follows in tracked changes:

24.182 "For pension funds, saving is -1.20.6 but this can be seen as the composite of the actual and imputed elements. In terms of actual flows, pension funds receive contributions of 10 from employers routed via households, 1.5 from households and pay out benefits of 16. In addition, they receive investment income of 2.2 and have output of 0.6. Their actual disposable income is thus -2.3 -1.7. When the imputed change in pension entitlements of 3 is taken into account, saving is -5.3 -4.7. In addition, employers make the pension fund receives an imputed contribution of 4.1 and also pay an imputed investment income on the claim of the pension fund of 1.8 4, which is matched by the imputed household pension contribution supplements of 4. The former element is routed via households, and deduct the pension scheme service charge 0.6. Both All elements together but adds 5.9 -1.2 to the saving of the pension fund and reduces saving of the employer by the same amount."

24.183 "In the financial account of the pension fund, the figure of 4.1, which was the imputed contribution, as well as the figure of 1.8, which was the imputed investment income, are is shown as the claim of the pension fund on the employer. There is a claim by households on the pension fund of the change in pension entitlements of 3. In addition, the pension fund either runs down financial assets or increases liabilities by 2.3, the figure corresponding to disposable income excluding the imputed contribution element from the employer."

	Accounts for pension benefits payable under a defined benefit scheme - expenditures								Accounts for pension benefits payable under a defined benefit scheme - revenues						
	Expenditures								Revenues						
Code	Transactions and balancing items	Transaction #	Employer	Pension fund	Households	Other sectors	Total economy	Code	Transactions and balancing items	Transaction #	Employer	Pension fund	Households	Other sectors	Total economy
	Production account						0		Production account						0
P1	Output						0	P1	Output	4		0.6			0.6
B1g	Value added, gross			0.6			0.6								
	Generation of income account								Generation of income account						
D1211	Employer's actual pension	3	10				10		Employer's actual pensio						0

	contributions								n contributions			
D 1221	Employer's imputed pension contributions	5	4.1				4.1		Employer's imputed pension contributions			0
B2g	Operating surplus, gross		-14.1	0.6	0	0	-13.5					
	Allocation of primary income account						0		Allocation of primary income account			0
D 1211	Employer's actual pension contributions						0	D 1211	Employer's actual pension contributions	3*	10	10
D 4	Property income	7				2.2	2.2	D 1221	Employer's imputed pension	5*	4.1	4.1

									contributions			
D442	Property income payable on pension entitlements	6		4			4	D4	Property income	7	2.2	2.2
							0	D442	Property income payable on pension entitlements	6*	4	4
B5g	Balance of primary incomes, gross		-14.1	-1.2	18.1	-2.2	0.6					
	Secondary distribution of income account								Secondary distribution of income account			
	Household total pension				19		19		Household total pensio		19	19

	contributions					n contributions			
D 6111	Employer's actual pension contributions	3*	10	10	D 6111	Employer's actual pension contributions	3	10	10
D 6121	Employer's imputed pension contributions	5*	4.1	4.1	D 6121	Employer's imputed pension contributions	5	4.1	4.1
D 6131	Household actual pension contributions	2	1.5	1.5	D 6131	Household actual pension contributions	2	1.5	1.5
D 6141	Household pension contribution supplements	6*	4	4	D 6141	Household pension contribution supplements	6	4	4

	Pension scheme service charges	4			-0.6		-0.6		Pension scheme service charges	4	-0.6		-0.6
D6221	Pension benefits	8		16			16	D6221	Pension benefits	8		16	16
B6g	Disposable income, gross		-14.1	1.8	15.1	-2.2	0.6						
	Use of disposable income account								Use of disposable income account				
P3	Final consumption expenditure	4			0.6		0.6	P3	Final consumption expenditure				0
D8	Adjustment for the change in pension entitlements	9		3			3	D8	Adjustment for the change in pension	9		3	3

							entitlements	
B8g	Saving, gross	-14.1	-1.2	17.5	-2.2	0		
B8g	Saving, gross (actual)	-10	-1.7	14.5	-2.2	0.6		
B8g	Saving, gross (imputed)	-4.1	0.5	3		-0.6		
	Capital Account							
B9g	Net lending/net borrowing	-14.1	-1.2	17.5	-2.2	0		
B9g	Net lending/net borrowing (actual)	-10	-1.7	14.5	-2.2			
B9g	Net lending/net borrowing (imputed)	-4.1	0.5	3	0			
	Changes in assets					0	Changes in liabilities	0

	Financial account					0		Financial account					0
F63	Change in pension entitlements			3		3	B9g	Net lending/net borrowing	-14.1	-1.2	17.5	-2.2	0
F64	Claim of pension fund on pension manager (current service cost)		4.1			4.1	B9g	Net borrowing/lending (actual)	-10	-2.3	14.5	-2.2	0
F2 + F8	Other financial assets	-10	-2.3	14.5	-2.2	0	B9g	Net borrowing/lending (imputed)	-4.1	1.1	3		0
							F63	Change in pension entitlements		3			3
							F64	Claim of pension fund on pension manager (current service cost)	4.1				4.1

Description of Transaction/Imputation #:		
1 - Current Service Cost: 15	Calculations:	
2 - Household actual pension contribution: 1.5	Current service cost	15
3 - Employer's actual pension contribution: 10	Cost of operating the scheme:	0.6
3* - Employer's actual pension contribution routed via households: 10	Employer's actual pension contribution	-10
4 - Cost of operating the scheme: 0.6	Household actual pension	-1.5

	contribution:	
4* - Cost of operating the scheme rerouted via households: 0.6	Employer's imputed pension contributions	4.1
5 - Employer's imputed pension contributions: 4.1		
5 - Employer's imputed pension contributions rerouted via households: 4.1	Household total pension contributions	19
6 - Interest on net defined benefit liability: 4	Pension benefits	-16
7 - Return on scheme assets, excluding any unrealized gains or losses, any costs of managing the scheme assets, and any tax payable by the scheme itself, other than tax	Imputed increase of pensio	3

included in the actuarial assumptions used to measure the present value of the defined benefit obligation, which is what the pension fund actually earns from investment income of the funds they manage: 2.2	n entitle ments owing to househ olds
8 - Payments of pension benefits: 16	
9 - Imputed increase of pension entitlements owing to households: 3	Notes: Numbers in Bold - Imputation; Numbers in Italic - Rerouting

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Celestino Giron_ECB**
  - In relation to employer-independent pension schemes, the text is inconsistent with the draft BPM7, where the agreements of GN F.12 are correctly reflected (BPM7 5.66, 13.32).
  - The term "pension manager" is used to refer to the pension sponsor. This is inconsistent with the use of the term "pension manager" or derivatives of the

term in 5.178 or 29.70. It is also very confusing to use "manager" for different kind of institutions depending on whether they belong to the investment fund industry or the pension industry, especially considering that many firms in those industries manage both investment funds and pension funds at the same time. We suggest to use the term "pension sponsor" or "pension guarantor" for the sponsoring role and that "pension manager" is used fro the administration role consistently with other parts of the SNA.

- **Marshall Reinsdorf_ISWGNA Editorial Team**

In 24.144, it is not correct to assume that the assets in DC plans are always used to purchase an annuity or withdrawn as a lump sum upon retirement. The retiring plan participant may be permitted to withdraw the assets at a later date or to purchase an immediate annuity, and if the assets are withdrawn, they may be moved into a different retirement plan account or into a non-retirement account. In the latter case, the amount withdrawn will generally be taxed as current income.

To improve accuracy, change "the benefits payable under a defined contribution pension scheme take the form of a lump sum ... " to "may become available to take as a lump sum upon retirement, or it may be a requirement of the scheme that these sums are to be immediately converted to an annuity ..."

Also, change the sentence that starts with "The appropriate recording" to say that if the assets are reinvested in an annuity or a retirement account, the appropriate recording is as a financial transaction. If the assets are deposited into an ordinary account, the withdrawal should be treated as a payment of retirement benefits.

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4 Do you have any other concerns with this chapter?

7 Comments

- **derya baş sonbul Türkiye Turkish Statistical Institute/National Accounts**

Dear colleaques,

In the calculation of the insurance sector, should income and losses arising from foreign exchange transactions be included in output calculations?

Insurance companies generally take foreign exchange gains and losses into account in premium calculations. Exchange rate fluctuations can affect insurance premiums and consequently their revenues. Especially for multinational insurance companies, changes in exchange rates can be a significant factor due to their operations in different countries. Therefore, insurance companies typically consider foreign exchange gains and losses to manage currency risks and to assess their financial performance.

Especially for companies operating in currencies other than local currency, this figure is important, especially in inflationary countries.

Therefore, it is important to evaluate insurance accounting from this perspective. Could I get your opinion on this issue?

Thanks

Best Regards

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

Do the manual SNA2025 support or take the concept of International Financial Reporting Version 17 (IFRS17), which is launched in this January 2024, into account of insurance session?

  - **derya baş sonbul Türkiye Turkish Statistical Institute/National Accounts**

Following the meeting with the Insurance regulatory authority in Türkiye, I have some observations regarding IFRS.

If IFRS-17 is to be implemented, it was noted that IFRS will consider exchange rate gains and losses in the calculation of premiums.

and also another topic with adjusted claims.

As we know, one of the methods that can be used in calculating adjusted claims is the accounting approach. However, within the scope of IFRS-17, it was noted that if we use the accounting approach, tracking extraordinary damage payments such as those for earthquakes or floods may become challenging.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Karen Kuhn_South Africa RB**
    - No Deposit Insurance Schemes (DIS) were not discussed in the insurance section. DIS are regarded in the manual as standardized guarantees. The manual refers to government-imposed levy, but it does not expand more on the classification of DIS as government or public financial corporations (insurer). See paragraph 8.84.
    - The accounting standard for valuing insurance contracts is not mentioned in the introduction.
    - Insurers use International Financial Reporting Standard (IFRS 17) to measure and value insurance contracts. The concepts such as unearned premiums, unexpired risk and claims outstanding are not applicable in IFRS17. Some of these concepts are only applicable under Solvency 2 measurement.
    - It is indicated in paragraph 24.55 that holder of life insurance is always an individual- Pension funds can also buy life policies (other than group life scheme) for its members. This is part of death benefits on the members life. Pension funds can have a claim on the technical reserves of life insurers and investment income.
    - Paragraph 24.77 - Pension funds can buy annuities from life companies on behalf of the fund. The fund members (pensioners) or beneficiaries are paid monthly annuity payments. Thus, pension funds can have a claim on the technical reserves of life insurers and investment income.
    - Paragraph 24.140 - The investment income also includes “income from insurance policies” which was not mentioned in this paragraph.
    - Paragraph 24.174 - Please clarify - The amount payable by the pension fund to the employer as a pension manager, must it be recorded as cash receivable or pension entitlements by the manager?
- **Nikky Toh Singapore Department of Statistics**

With reference to paragraph 24.56c, we would like to seek clarification on the definition of premium supplements in the insurance output formula for life insurance. As investment income attributed to insurance policyholders is treated as premium supplements (paragraph 24.55), we wish to clarify whether all income from reserves of life insurance should be included in output through premium supplements, or only bonuses declared in connection with life policies (as mentioned in paragraph 24.56c) be included in output?

- **Rosie Maslin_UK Government Response**

Para 24.4 removes ‘direct’ and refers to ‘life and non-life, but 24.6 retains the ‘direct’ concept. It may be better to continue to refer to ‘direct’ in 24.4.

Para 24.36 A definition of ‘service charges’ may be helpful for compilers here?

24.210 Are there plans to elaborate further on the ‘supplementary table on household requirement resources’ in future drafts? This feels like an abrupt mention of an additional and potentially significant piece of work of NSIs.

Chapter 25: Selected issues in financial instruments

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The UK are pleased to see some amendments to this chapter. The breakdown of what are core and supplementary presentation types of derivatives adds clarity as well as extended discussion on 'Investment income associated with financial instruments.'

- **Karen Kuhn_South Africa RB**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Our previous comments, reflecting some of the changes made, are below.

One general comment is that this dedicated chapter could more usefully have been integrated into chapter 12, which would make it easier in terms of reading and avoiding repetition and cross-referencing.

Guarantees

25.12 seemed to be a considerably change from 2008 SNA 17.213 when (only) deleting the last sentence of 2008 SNA 17.213, while adding an "and" as a liaison of the two 'criteria'. Given the last sentence of 2008 SNA 17.213 (including an "and"), the liaison between the two criteria is necessarily an "or" in the current 2008 SNA (though it is omitted). Irrespective of what is deemed correct – i.e. whether 2008 SNA is wrong and should be corrected, or not – there is here a triple issue to Eurostat D: (i) this change was not easily identifiable in the absence of track changes, (ii) a seemingly innocuous change is in fact amending the 2008

SNA significantly, outside task team review, (iii) it needed to be decided if a 4th category of guarantees exists (aside from derivatives, one-off or standardised) or if one of the category should be de facto the residual one (one-off or standardised). The new wording still deviates from 2008 SNA 17.213, and this change was not subject to global consultation and should thus be avoided, i.e. the use of "or" should be maintained in 2025 SNA. As there was no discussion, no change should be made. Additionally, the full wording of the last sentence (adding "of the risk of the calls") should be used.

There may be a need to examine whether D.71-D.72 should also be applicable to government standardized guarantees, even non-commercial ones – as argued by INSEE during past EDPSWG discussions. This D.71-D72 recording, not foreseen in the current MGDD, does not prevent a capital transfer at inception nonetheless.

A capital transfer is to be recorded for non-commercial schemes, generally for the difference in value between the present value of calls, net of recoveries, and the present value of fees.

In contrast, **25.32** suggests that schemes with significant fees though not covering the costs should be treated as market activities, despite explicitly recognizing that the price is not economically significant (!), and proposes to record covering government payments as subsidies, or capital transfers on a cash basis. **25.33** seems to prescribe recording a capital transfer in case no fees are collected only if government recognizes a provision.

The new chapter also discusses the sectorisation of entities involved in granting standardised guarantees – Eurostat considers this should be avoided outside task team review processes and outside the issues featured in the consolidated list of recommendations and thus the paragraphs should be dropped. **25.32-25.33** discussions on institutional units/allocation to S.13 thus seem out of place. They seem to apply some sort of quantitative approach (similar to the 50% test, and not relying on economically significant prices, which require a break even in the long run) as sole criteria, without looking at qualitative criteria (which is even worse when discussing units that are engaged in financial activities).

Some of these debatable wordings existed in 2008 SNA, though.

The current text was particularly unconvincing as to who is the counterpart of the guarantor, mentioning alternatively the guarantee holder (25.18, which therefore does not answer the question), the fee payer, or the lender. **25.20** seems to indicate that the purchase is in the account of the fee payer, forgetting that the fee is an F.66 and the output is merely a partitioning of the accrued fee. 25.21a foresees the investment income attributed to the fee payer, instead of having it logically with the asset holder.

25.21c discusses calls under standardised guarantees and concludes they "are recorded in the secondary distribution of income account" (now name of account changed, but error was not corrected), while they should constitute a financial transaction (reduction of AF.66L matched by F.2).

While the issue of who is the asset holder is certainly a thorny issue, which was not necessarily well treated in 2008 SNA, any change in text should be an improvement, or otherwise the initial text should remain unchanged.

25.18 second and third sentences are extremely debatable. At inception: if the fee is paid by the lender no problem a priori exists (contrary to what 25.18 implies); if the fee is paid by the lender, one could wonder if the lender should not show a lower claim together with a guarantee. Over time, one issue is whether the AF.66 would reflect market value or not.

An issue is whether AF.66 would presumably need to be at market value or not (as not being tradable). AF.63 and AF.64 (and some AF.62) are at market value. AF.61 need not be at market value, being short terms instruments in nature, which is precisely what standardised guarantees are often not. Therefore the analogy lies more with pension entitlements.

The market value is relevant for AF.66 because standardised guarantees are indeed long-term instruments, and the probability of defaults may be significantly re-estimated over time. The Eurostat manual (MGDD) recognises equally compilation approaches that cumulate transactions, thus eliminating holding gains/losses altogether, as well as compilation approaches (based on provisions) that create temporary holding gains (that cumulatively should however add to zero).

Chapter 25 should address the issue of whether AF.66 should equate to the expected calls minus recoveries (as implied by **25.15**, as well as by the slightly circumvoluted 2nd and 5th sentences of **25.17** on the "liability decreasing" and the "recognize the guaranteed fee over multiple periods"), in which case fees payable later on must appear as an asset/receivable of the guarantor (gross approach), or whether AF.66 should also net future fees (net approach).

Eurostat D favours at this stage the gross approach, noting that 2008 SNA 11.118 already explicitly recognizes that options not paid at inception should be recorded at their fair value against a receivable for the option issuer (payable of the option buyer).

It would be better that the short section on one-off guarantees prescribes to record a capital transfer at time of call for the difference between the call amount and the fair value of the recoverable retained, rather than making a binary choice (all D.9, or all claim) like currently is the case in **25.8**.

In addition, the case of guarantee expected to be called from inception (paragraph **25.9**) curiously refers to "implicit guarantee", while the primary cases concern explicit guarantees. Such explicit cases of guarantees expected to be called at inception should be treated first.

The 'implicit guarantee' discussion seems interesting, while restricted to cases of financial instability and seemingly prescribing a call when distresses occur (which seems usual).

Paragraph **25.10** seems misplaced. Indeed, the trilateral nature of guarantees seems applicable for all financial guarantees. Similarly, either the debtor or the creditor can contract with guarantors, also in the case of one-off guarantees.

25.10 avoids the issue on whose balance sheet the counterpart asset for AF.66 is. The following sentence should be changed: "These are comprised of the sorts of guarantees that are issued in large numbers, usually for fairly small amounts, along identical lines." To "These are comprised of the sorts of guarantees that are usually issued in large numbers for fairly small amounts, along identical lines." Please delete also the inserted "and" to avoid a change in meaning that was not subject to consultation.

25.17 "While the ideal approach in such cases would be to recognize the guarantee fee over multiple periods, when this cannot be done then a cash accounting approach will have to be accepted. This is inaccurate for an individual guarantee but acceptable when there are many guarantees in such standardized guarantee arrangements." No, this could only be acceptable if the flow of new guarantees and fees is steady! The precise point is that the guarantees are standardised, therefore the accrual of the fees can be estimated. There is no practical need for this simplification. Moreover, the possibility of the gift component, when government provides standardised guarantees is not mentioned. Thanks for having taken on board the "steady flow", but national accounts is not intending to measure the status quo, this is not interesting, it is rather interesting to assure that changes in economic activity are accurately reflected in the accounts. As mentioned previously, this simplification is quite simply not needed as the nature of standardised guarantees implies the existing of an estimate of accrual that is not meant to be unused.

25.18 and others please clarify the term "guarantee holder". The addition here and in **25.22 (last sentence)** is problematic. Maybe addition of T-accounts would be useful to ensure a harmonised application of the standards. Otherwise we suggest dropping the addition to 25.22, and putting the issue to research agenda. If the nature of the call is deemed not a write-off, but rather a debt cancellation, so that a loan redemption transaction from the debtor to the lender takes place, then AF.66 can be recorded on the balance sheet of the debtor, which is more analytically interesting and avoid the OVC. This is more consistent with recording of calls on one-off guarantees.

25.18 last sentence should be dropped, it is dangerous and does not add anything useful. “In any case, this amount in provisions is not likely to be significant compared with the total value of the instrument holdings concerned.” The change leads to grammatical difficulties in the sentence and does not resolve the issue. Please drop this last sentence.

25.21a Which investment income? Why not use the term uses and resources instead of payable and receivable. Could you not use the wording of ESA 2010 4.68?

25.21c should be dropped or distinguished from the rest of 25.21. Calls under standardised guarantees are not recorded in the secondary distribution of income account (as implied by the introduction of 25.21)! They are financial in nature. see above.

25.25 “Please refer to the UN ECB Handbook Financial Production, Flows and Stocks in the System of National Accounts for a detailed example of loan guarantees.” In general, references to handbooks that have not undergone global consultation should be dropped.

25.30 “Deposit insurance, however, is not always in the form of a standardized guarantee.” à “always” should probably be replaced by “usually”. Thank you for the amendment, however, we are not of the opinion that deposit insurance should only be recorded as a tax in case the payments are "not set aside". (In MGDD, treatment as a tax is used, unless the payments are refundable in nature.) This matter was not discussed in the SNA update, therefore the existing differences in treatment between SNA and ESA could unfortunately not be resolved. We suggest again the modification proposal we made before.

25.32 The following sentence should be eliminated: “If the fees cover most but not all the costs, the recording is still as above.”

25.33 “In general, when a government unit provides standardized guarantees without fees or at such low rates that the fees are significantly less than the calls and administrative costs, the unit should be treated as a non-market producer within general government.” “Significantly” should be deleted. In general, both paragraphs 25.32 and 25.33 could simply be dropped, as paragraph 25.31 indicates that normal rules of sectorisation apply, so not need to introduce errors here. see above.

Financial derivatives

We wonder whether it is justified to deviate from the text and terminology set in SNA 2008 in relation to the categories of derivatives. See 2008 SNA 11.121, for instance referring to currency swaps as synonymous of cross-currency swaps and not of forex swaps. We think pedagogically superior to start with IRS and follow with FRA as in 2008 SNA.

We miss a bit of discussion on futures, including bond futures – that have significant market visibility. A bit more about the strong policy push of instruments onto organized markets would be an advantage.

The important notions of at the money/in the money/ out of the money for options seem missing.

Eurostat D supports **25.42b**. The flipping characteristics essential and exquisitely pedagogic. While it is welcomed that CDS are described as option-like and not as forward-like in the new SNA, despite their names (indeed: CDS are not swaps), CDS can become negative only because/if they are not recorded gross: with the annual fees payable recorded as an asset/receivable of the CDS seller (and the CDS holder has a liability/payable). See below. Eurostat D argues it makes little difference that fees are paid upfront, at the end, or spread.

20.51a "counterparties" should be corrected to "parties".

25.51d "comparative advantage in borrowing" should be eliminated or better explained. Also, the 4th sentence of 25.50.d is unclear to us.

Thank you for the insertion on off-market swaps.

25.57 "If the stock price rises above the strike or exercise price, then the shares will likely be purchased at the strike price." "likely" should be deleted, there is no intention of providing a gift.

25.58 If warrants are an option, they give the right to buy, but not the obligation. Otherwise, they are rather forward-type instruments. In this context, the discussion of covered warrant in the last paragraph is confusing and possibly erroneous. Then saying that warrants differ from options in so far as the former leads to the creation of instruments, as stated in para **25.56**, is true only for the first class but not for the second class (naked/covered). It is a bit clearer now, but a type by type distinction should be made. When warrants are attached to preference shares with an obligation of conversion, the preference shares should be considered equity.

25.58-25.59 on warrants could usefully more clearly distinguish warrants issued by the unit committed to create an instrument, often part of another instrument issued (such as a bond), then distinguishing those that are detachable from those that are wedded, from warrants issued by a third party, often called naked warrants or covered warrants. Thank you.

25.70 seems ambiguous. It seems to take the view of 2008 SNA 11.118, which already explicitly recognizes that options not paid at inception should be recorded at their fair value against a receivable for the option issuer (payable of the option buyer) – which is/would be good. However, "*If the premiums are paid after the purchase of an option, the value of the premium payable is recorded as an asset, under other accounts receivable/payable, at the time the derivative is purchased, financed by other accounts receivable/payable from the writer*" presumably then implies a receivable of the writer and a payable of the holder.

Also **25.70** seems to include the CDS in the gross valuation approach – which we can support. But then this contradicts that CDS may turn negative in value, as in 25.65 or 25.42b. **25.65** penultimate sentence seems to have a typo – it should be "seller" after "buyer".

25.73, 3rd sentence seems not clear.

25.74 gives unnecessarily the impression that novation occurs upon the transfer of OTC derivatives to organized markets, while novation simply implies a new contract or/and a new third party.

Eurostat D considers it is important to keep the difference between initial margin and variation margins as in **25.78 and 25.79**, although the term repayable and non-repayable may not be best. Variation margins can be assimilated to settlement (and variation margins are reported under F.7), with an immediate reopening of the position, rather than collateralization.

25.83 is correct for forwards but not for options.

25.84 The paragraph fails to address the problem that netting generates in terms of asymmetries and other change in volumes, that are not interpretable. In any case, the paragraph should not use the term "consolidates" but rather "nets".

Editing in new paragraph **25.73** introduces a typo: "and" is used instead of "an".

New paragraph **25.84** should at least recommend to use a gross approach wherever possible.

Employee stock option

25.91 appears completely erroneous as it gives the impression that the IFRS follows the intrinsic value method, which is not the case (See IFRS 2 BC69 and BC79) as it follows a fair value method, applying the grant date for valuation. Furthermore, the Para 25.91 (which copies SNA 2008) forgets to refer to the difference between the strike price and the market price.

One way would be to delete the IFRS reference.

At the same time, it would seem useful to keep referring to IFRS as a reference point for source data accessible to compilers, even where the SNA guidance would deviate from the IFRS in some aspects. As an example, the compensation of employees could follow the IFRS (because making adjustments may be difficult) while the balance sheet could follow a market valuation.

25.98 last sentence seems curious.

ESOs are assimilable to performance related bonuses.

25.104 last sentence may be misleading is so far as contributions to pensions funds are on an accrual basis and the instruments to settle this cash or own shares is a transaction in F.64.

2008 SNA 17.398 should be retained just after 25.104.

Flows associated with instruments and interest

25.105(114) First sentence seems misleading. The balance sheet primarily reflects transactions in assets and liabilities and only in a second instance sectoral imbalances (impacting more net assets). It was reviewed, but financial transactions should be put first and also other economic flows are disregarded.

25.105-108 The paragraphs repeat other parts of SNA, and raise the expectation that a comprehensive discussion of all flows will follow, which is not the case. This part should be integrated to existing chapters, rather. Now 25.114-118 (25.118 is new, and again a repetition, also 25.131).

Figure 25.1 is not provided for comments. Will it be sent for separate consultation?

25.109 "Within the SNA, the term "corporations" is used to describe institutional units providing both financial and non-financial services." The following should be added (underline): "Within the SNA, the term "corporations" is used to describe <u>market</u> institutional units providing both financial and non-financial services."

25.120 and Generally The chapter is wordy and it is not clear why a separate chapter aside from existing chapters is needed. One example: "There are now very many, very diverse ways in which money can be borrowed and lent." Why is such a sentence needed?

25.112 (25.121) "All financial intermediation in the SNA is carried out by financial corporations." This sentence should be deleted or refer to financial intermediation fulfilling the economically significant price criteria. Non-market financial intermediation can be carried out by general government units. Either other financial intermediation should be seen as non-market, or other financial intermediation should be seen as not financial intermediation at all. As an example, standardized guarantees not commercially priced, thus implying a D.9 at inception is either not financial intermediation or non-market financial intermediation. Also, commercial intermediation activities may be carried out not-autonomously, and thus classified in S.13. The sentence was changed to include incorporated enterprises of S.14, but not S.13 entities as requested. This precision on the sector was not part of the consolidated list of recommendations and should therefore be amended in line with above or deleted. It would also be an option to retain "typically" and eliminate the part on the "possible exception" for the household sector.

25.114 (123) we would avoid calling indirectly measured what is essentially an accrual issue.

25.117 (126) words on dwelling refer only to unincorporated enterprises, which could be misunderstood.

25.119 (128) It seems that a new convention is established to exclude other accounts from bearing interest, which seems against the agreement at the AEG. “Except for other accounts receivable or payable, only gold bullion, currency, non-interest-bearing deposits, financial derivatives and employee stock options never give rise to investment income. For the sake of simplicity, the SNA assumes no interest is charged on other accounts receivable/payable.” On the substance, other accounts bear interest, where the stock is long-term, acknowledged by the current SNA 3.144 for trade credits, and may be neglected only for short-term payables. How to deal with the new convention established is not explained. For example, how can a discount stemming from a net present value estimate be unwound in these circumstances if not through interest? Very long other payables are also discounted in the MGDD (decommissioning costs, pension lump sums), which perhaps could be mentioned in the SNA. This change should be reverted and not made without understanding all the implications.

The reader expects that holding gains are important for foreign currency instruments (**25.129**) that sector reclassification occurs (**25.132**) and wonders why creations/settlement of instruments are excluded (in **25.134**).

25.129 1/ This paragraph is too loosely written. Why have a separate chapter 25 at all, when any points can be more usefully put in context in the existing chapters (e.g. existing chapter 12 C) where it should presumably be more solidly explained what type of holding gains and losses are to be recorded in the national accounts and which are not to be recorded? In that case, the confusing sentences on holding gains and losses not to be recorded in the national accounts can be omitted, avoiding confusion on the part of compilers which should be able to use the text as a basis for harmonised compilation. 2/ Securities are subject to holding gains and losses, not “may”. If they are not traded, and no market exists, it is an indication that they are in fact not debt securities. 3/ “nominal” should be specified where holdings gains and losses are to be recorded.

20.132 “Second, loans that are deemed uncollectible, and that are not forgiven, are written-off and the values disappear from the asset boundary as volume changes. Refer to Chapter 13 for a detailed discussion on volume changes.” Government as a creditor should be adapted as forgiveness is de facto assumed in many instances following ESA 2010.

25.128 1/ In paragraph 25.2, the point of section 2 should be more clearly described, i.e. that it covers the distinction between financial transactions, non-financial transactions and other flows. 2/ Figure 25.1 is not actually included in the draft – therefore it should be put for separate consultation. 3/ The following sentences need to be corrected: *“Implicit fees are subdivided between those that appear as a margin between the purchase and selling price and those that represent a margin on interest paid and received (FISIM). All income flows are investment income, and these flows are divided between interest, dividends, withdrawals from quasi-corporations, reinvested earnings on foreign direct investment and investment income attributed to investment fund shareholders.”* FISIM is output of the financial corporations and intermediate/final consumption of the consumers of these services. The second sentence implies however, that it is a type of property income. Furthermore, the use of the term “investment income” must be avoided, when ‘property income’ is meant. This type of imprecision in terminology should be avoided. 4/ The type of property income associated with standardised guarantees is not described in the draft chapter 25, contrary to what the paragraph says. It should either be discussed (and put for global consultation) or explicitly be kept as an open issue.

25.138 The reference to golds swaps is confusing and gives impression of an error: “However, a fee or interest can be earned when gold is lent out (i.e., gold swaps).” Gold swaps are collateralised loans. This must be clarified here. The interest (in general not fees) earned is on the deposit/loan asset and not on the gold. Any fee can be on the gold.

25.141 1/ It should be clarified that “charges on SDR allocations” are interest income, too. 2/ The underlined part should be added to the following sentence; “Sometimes, new allocations of SDRs may be made; when this occurs, the allocation <u>and holding are</u> recorded as a transaction<u>s</u>.”

25.142 “The cost of producing the physical notes and coins is recorded as government expenditure and not netted against the receipts from issuing the currency.” If notes and coin (use singular form for coin) are government expenditure, while we might agree, this runs counter to the proposal to record collective consumption in the central bank (which we disagree with). Most importantly, it must be clarified what is meant by “receipts”, so as to be clear that those “receipts” are an incurrence of a liability in currency (AF.21), no matter in which sector they are recorded. We see the changes, though not for clarifying that the "receipts" are an AF.21 liability, but this does not solve the issue. If this should be government consumption, should it follow that the consumption of central bank should be reconsidered?

25.144 and following: The current FISIM method produces asymmetries and negative production (due to interest fixed at inception, while reference rates very over the lifetime of the instruments). This is not discussed, despite it being the problem with FISIM. Why is this crucial problem omitted? Replacing holding by issuing seems inappropriate due to the fact that FISIM is not fixed at issuance of the loans or with the depositing. This causes the asymmetries.

25.144 should be more clear that only certain financial intermediaries are deemed to produce FISIM.

The 1st part of the second sentence in Para **25.145** is debatable.

On the FISIM section, the author could mention the fact that FISIM can be excessively volatile/large if the reference rate is not smoothed out to match the average duration of the portfolios that are fixed rate (an issue raised by BE). GFS has also experience of excessively large FISIM (on government borrowing) while the typical borrowing rate of government is typically very good (thus FISIM to be small).

25.145 The paragraph is misleading. The act of lending own funds is a productive activity, it is a transformation from one financial instrument to another, and the productive activity is for example to check the creditworthiness of the borrower. As such, the paragraph adds to confusion, instead of dispelling it.

25.138 In a harmonised international statistical manual, the distinction between loans and deposits should not rest on a “national definition of broad money”. Is it the intention to have only this national definition as a distinguishing feature between loans and deposits in the SNA?

Section on debt securities (not renumbered)

The four types of securities in **25.142-25.145** miss the indexed variety. It is very rare that zeros are sold at premium (25.143) and in contrast it is common that coupon bearing bonds are sold at premium (25.144 “in some circumstances” being unnecessary/misleading).

25.146/25.149 are correct only for fixed rate instruments, and coupon payments should be used instead of "subtracting any financial transaction". Only examples of broad indices are given, not narrow ones.

25.147 The bid-ask spread is the service charge producing the value added of brokers in the economy, irrespective of whether it is explicitly charged or not – most often it is not explicitly charged, nonetheless it is present.

25.148 (158) Addition of "secondary market" is needed, otherwise the statements and conclusions are wrong. Furthermore, and more importantly, the whole paragraph appears to take the creditor approach for calculating interest, rather than the correct debtor approach. As such, the whole paragraph should be simply deleted, similarly to 25.149.

20.159 and following: Why only focus on discounts and not premiums?

25.152 Suggested addition: "In the SNA, the debtor approach is used for interest".

25.175 (**184)** seemed not to reflect the agreement at AEG favoring some alignment on the ESA 2010 on super-dividends (following discussions flowing from D.17). Eurostat D recalls that ESA 2010 actually uses two references: distributable income (ESA 2010 paragraph 4.55) and entrepreneurial income (ESA 2010 paragraph 4.56, or operating profit, ESA 2010 paragraph 20.206, or even net operating income, ESA 2010 paragraph 20.217a), and that it was the former that needed to be retained in the SNA (e.g. including after tax), a guidance that is already in substance in the MGDD chapter.

With respect to superdividends of FDI, Eurostat D notes that the current chapter 25 wording promotes recording as dividends all distributions unless arising from the sale of assets. As commented many times in the past, what is proposed seems a rather bizarre and unnecessary complication for compilers. On the one hand, the issue is B.9 neutral such that the problem is not critical to Eurostat D (as any change in D.42 to be recorded is counterbalanced by a matching change in D.43, such that D.43+D.42 is fixed). On the other hand, we understand that BoP colleagues would prefer avoiding the superdividend rule for FDI because they would like to show negative D.43 in case of large distributions: showing that the investor is actually disinvesting – which seems reasonable.

However, making an exception for sale of assets (by the FDI investee, which then passes the proceeds to the investor) is particularly unwelcomed: (1) money is fungible, so that it is questionable to distinguish distributions on sale of assets from distributions of reserves; (2) What will be the source data for that? This will create a huge (and unnecessary) burden to compilers; (3) it should be argued that the investor is disinvesting from the economy when forcing the investee to sell assets and distribute the proceeds or to distribute reserves, alike – so why this distinction? This distinction seems to be motivated by a rearbattle by some who never welcomed the superdividend test introduced in the 2008 SNA at the request of Eurostat.

In truth, it can be noted that ESA paragraph 20.217 also makes this distinction for NCB distributions. But this wording is largely reflecting older reasonings on these issues (that indeed started with some high-profile central bank mega-distributions, 25 years ago), and may well need to be simplified in the new ESA. At the same time, NCB are large and well documented units, and the distinction made in ESA 20.217 poses no difficulties to compilers, contrary to any implementation on all cross-border flows proposed in chapter 25 draft 25.175.

25.129 seems to indicate that unallocated gold account held by monetary authorities would be AF.11 on the creditor side but as AF.2 on the debtor side. The introduction of such a conceptual inconsistency between the debtor and the creditor sides appears astonishing, at a time where consistency is promoted urbi et orbi. Opening the AF.11 liability positions for such unallocated gold occurring between monetary authorities would be much more reasonable, and also informational.

The concept of monetary gold is debatable and creates a lot of difficulties to the UK (London gold market), which repeatedly writes about this. The 1968 SNA was far superior in recognizing financial gold instead (that could be extended to silver).

25.146 as currently drafted was not ideal either in the first place with “increase” and “financial transaction” two erroneous wordings to start with (and this paragraph is valid for fixed interest only). see above.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mark de Haan Netherlands**
    - Paragraph 25.53: We think that the non-zero value is a loan **by convention**. The reason for inclusion of 'by convention' is that it does not fully meet the characteristics of a loan as it is not interest-bearing and it is not really repaid at maturity. Because it is not really repaid at maturity, at least the market participants involved will probably not consider it as a repayment of a loan, it

would be very helpful if this paragraph was expanded, better clarifying how to record future streams and how to partition these streams between the loan and derivative component.

  - Paragraph 25.73: typo in '…protection leg is greater than that of the payment leg, the seller pays and upfront premium…'
  - Various paragraphs: 'over the counter' or 'over-the-counter'
  - Paragraph 25.105: typo in '…and that there are 5 employees. for a total value…'
  - Paragraph 25.113: odd reference to 'services in the financial account' in this paragraph.
  - Paragraph 25.114: Despite the changes, the first sentence remains odd considering the role of revaluations and other changes in determining the balance sheet values. Perhaps an option could be to state that "Sectoral imbalances in the current an capital account results in changes to the stock of financial instruments".
  - Paragraph 25.121: In the first sentence to state that 'with the possible exception of some financial services carried out by unincorporated enterprises classified in the households sector' seems unnecessary. Firstly the output of households of certain types of financial services is all but certain. Secondly, it is not impossible to imagine conditions in which S13 or even S11 could produce financial services.
  - Paragraph 25.153: The concept of 'variable' now appears to the relate only to indexed debt. If Floating Rate Note's are to be viewed as fixed interest rate debt that should be made clear. The reference to paragraphs 25.169-25.178 in this paragraph seems incorrect.
  - Paragraph 25.172: A word appears missing in "The interest rate should be the at which…"

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

There appears to be no discussion of climate offset permits, despite significant use and issuance by government and private sectors in SNA Chapter 25 (or chapters 11 or12). Even if issued by governments, recording these instruments as non-produced non-financial assets seems most appropriate.

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Para 25.120: “The act of financial intermediation is thus one of devising financial instruments that encourage those with savings to commit to lend to the financial institutions on the conditions inherent in the instruments so that the financial institutions can then lend the same funds to others as another set of instruments with different conditions. This activity encompasses financial risk management as well as maturity and liquidity transformation”. We suggest deleting that part . It is lengthy, not accurate and does not add anything to the previous text.

Para 25.122. For sake of clarity, we suggest some slight editing: “Further, interest rates on loans are typically higher than the costs of funding by banks (i.e. mainly deposits); or, conversely, interest rates on deposits are lower than the risk-free interest at which banks may invest these funds (i.e., loans).” Rationale: The cost of funding is a composite element as banks have in their liability not only deposits but debt securities etc. In the SNA, the cost of funding is approximated by the interbank rate. This is also the risk-free rate at which banks invest funds, and certainly not the interest rates on loans.

- **Jorrit Zwijnenburg_OECD**

25.143: Should this section also mention crypto assets with a corresponding liability designed to act as a medium of exchange?

25.154: Should this section also mention debt security tokens and utility tokens? The same applies to reference to equity tokens and derivative tokens in the other relevant sections.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Sarah La Rosa Belgium National Bank of Belgium**

In the new paragraph 25.128, one last mention of FISIM is still present, which should be replaced according to table 21.9

*"All fees payable to the owners of securities used for securities lending and to the owners of gold used for gold loans (whether from allocated or non-allocated gold accounts) should be recorded by convention as interest. The interest may have a **FISIM** component, separately identified, if the unit providing the loan is classified as a financial institution."*

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

There is duplication on financial derivatives across chapters 12 and 25 (section 2). Could this be merged into one section? This also applies from 'Monetary gold' onward.

There is different guidance provided for recording deposit insurance: "standard guarantee" in SNA chapter 25 (25.30) and "insurance-type" in SNA chapter 8 (8.84).

Slightly different definitions of currency are provided: SNA 25.142 (this paragraph added "normally") from SNA Chapter 12.54 and BPM 5.36.

A difference in terminology with the draft BPM7 – "initial margin" in SNA 25.81, "repayable margin (the better term for statisticians) in BPM 5.94.

SNA Chapter 25.128 states the assumption is that no interest accrues on other accounts receivable/payable. In contrast BPM states that interest can accrue on other accounts receivable/payable – BPM 12.106.

SNA Chapter 25.185 describes dividends as earned income; SNA Chapter 8.133 describes dividends as investment income. There should be consistency in description across different chapters otherwise confusion among compilers can arise.

In the long section on recording flows in SNA Chapter 25 there is no discussion of recording flows in traded emission permits despite guidance being needed.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **Celestino Giron_ECB**

25.186 only lists dividends and retained earnings within "Investment income attributable to collective investment fund shareholders", ignoring the "imputed dividend" corresponding to indirect charges to shareholders, as agreed in GN D.16 and as recognised in the draft BPM7 12.38.

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4 Do you have any other concerns with this chapter?

5 Comments

- **Sarah La Rosa Belgium National Bank of Belgium**

Relating to the new paragraph 25.146, and in particular to the last sentence *"There are no implicit financial services on loans and deposits for central banks.",* what about loans/deposits with international institutions such as World Bank, IMF, BIS? Are these also considered interbank, e.g. central bank deposits with the BIS? Clarifications would be welcomed.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

25.81 - More information around which scenario(s) margins are recorded as loans or as accounts payable/receivable would be useful.

More guidance would be useful on what is “normal” trade credit, and “extreme cases” (SNA 25.192) and “extraordinary purposes for trade accounts” (25.128) and wow are these terms defined. It would also be useful to have further guidance on how trade credit and trade accounts differ. In contrast BPM does not provide such distinctions simply stating trade credit among the instruments on which interest can accrue, BPM 12.106.

SNA chapter 25 uses language that is difficult to understand (“protection and payment legs” sentence in 25.73) or close to unintelligible (“cryptography” sentence in 25.64).

- **Karen Kuhn_South Africa RB**

No

Chapter 26: Islamic Finance

4 Comments

- **Russell Krueger _United States IMF Retired**

Comments on Chapter 26 – Islamic Finance

Russell Krueger

The draft 2025 SNA includes a new chapter on Islamic finance. This is an important new statistical area – Islamic finance was not significant when the SNA framework was developed, but it has evolved and grown rapidly in recent decades to become a factor in many countries' financial systems. Moreover, Islamic finance introduces important behavioral and policy changes that might need to be encompassed within the SNA framework. Chapter 26 is an important addition to the discussion that can improve statistical coverage and promote greater standardization for compilation of Islamic in national statistical programs. It also provides a foundation for future outreach and follow-up initiatives to countries and international bodies striving for more coverage and better analysis of Islamic finance.

Comments are below. Addenda on specific topics follow, which include more extended notes on (1) behavioral differences between Islamic and conventional finance, (2) proposed redraft of ¶s 26.6 – 26.9 to tighten the presentation and highlight that they alter the conventional treatment of institutional units (IUs), and (3) peer groups for Islamic and conventional finance.

General comments –

Comment 1. Paragraphs 26.14 and 26.15 provide important descriptions of treatment of bank remuneration to customers. The first paragraph describes SNA treatment of profit equalization reserves and how funds flow between bank and customers are affected; the second explains that some Islamic financial instruments do not have conventional equivalents and that returns to depositors are based on the specific Islamic financial instrument used. In effect, the paragraphs explain that care must be taken to accurately classify and measure different types of returns and avoid an assumption that the returns are in effect an Islamic near-equivalent of conventional bank interest payments. Many statistical implications follow that should be built into advice given to compilers.

Comment 2. Section C.1 Implicit financial services on loans and deposits - Two Questions.

It is often held that the cost structure of Islamic banking is 20% more expensive than conventional banking – which would presumably be covered by lower remuneration on deposits or higher loan rates. The higher margin implies higher services output for Islamic banks.

Question 1 – Does this proposition hold up empirically in general or just in certain market segments? This condition is important - as stated in ¶ 26.38, research in 2023 found minimal differences and thus a separate rate for Islamic institutions is not needed unless there is evidence otherwise.

Question 2 – Are any differences greater on the deposit or loan sides? I would guess on the deposit side because of the religious motivation of depositors; in contrast, on the loan side competition from conventional finance would be stronger.

These points are empirically relevant – they affect thc urgency of compiling SNA data on Islamic finance and its likely economic impacts.

A further implication is in ¶ 26.39 that argues for estimating implicit services on total deposits and loans, rather than employ an instrument-by-instrument approach. This seems to contradict the sense of paras 26.14 and 26.15 as described Comment 1, above. I have long worried that this point in the forthcoming SNA might not be received well in some quarters when seen by a broader audience. I suggest that possible objections might be forestalled by highlighting plans for further research along with clear statements for regarding a subsequent compilation guide or thematic account, etc.

Comment 3 – Standardization of presentation

Islamic finance is not a standardized product. Practices and interpretations in one economy might not carry over into others. Efforts at more standardized or harmonized practices (IFSB, AAOIFI, etc.) are ongoing, and the SNA chapter should be seen as contributing to development of more standardized statistics. Conversely, the SNA will need to adapt to diverse practices and terminology and evolving practices.

Specific comments –

¶ 26.2 Append to the last sentence "that align with international financial sector standards and best practices."

¶ 26.3 Add a reference to financial soundness aspects of Islamic finance

¶ 26.4 Replace 'FISIM' with the new terminology (as in Section C.1).

¶ 26.5 'dues' is both the singular and plural form**.**

¶ 26.10 Shari'ah-compliant pension funds exist. Compliance can affect acceptability between defined benefit plans (which might be sourced from noncompliant activities) and employee contribution funds (where the employee chooses compliant funds). The text does not delve into such funds – ask the IFSB is something more should be said about Islamic pension funds.

¶ 26.11 Should the last sentence of 26.11 be "Inflows from customers include unrestricted funds that can be intermingled with other bank funds, in the same way as deposits in conventional banks, but the funds must be invested solely in Islamic financial instruments or other Shari'ah-compliant activities."

¶ 26.13 This paragraph appears to cover only windows of conventional banks that accept deposits; it concludes that the window should be considered to be a separate institutional unit independent of its parent but still within the depository corporations sector (because it accepts deposits). The paragraph should add two points;

First, recognizing the independence of the window, it should be formally *de*consolidated from its parent. If the parent and window are both depository corporations, this is less important in the national accounts, but could be important for financial soundness or monetary policy purposes.

Second, In contrast, windows as separate IUs could be classified outside the depository corporations sector – insurance is the one I remember most often.

¶ 26.20 Additional types of financial auxiliaries might include Brokers, Shari'ah Boards, and depositories for assets held under various Islamic financial instruments.

¶ 26.26 The sentence on *light takaful* can add that it is not based on tabarru principles and takaful funds are consolidated into the takaful operator's accounts. A similar statement might be added to para 26.49, or a cross reference made.

¶ 26.42 Change the term 'FISIM' in the formula.

¶ 26.52 This paragraph has a table of earned income in the SNA and BPM. The SNA has category D412 for returns similar to interest that details 3 explicitly Islamic categories of income – on deposits, loans-financing, and debt securities. This is a very useful presentation – it should be considered as mandatory for at least a dozen countries, and also a priority for the GCC and ASEAN regional groupings. (Similar detail would also be useful supplemental information in the BPM.)

26.57 The word 'only' on the last sentence is confusing and should be dropped, giving "Restricted mudaraba deposits held on-balance-sheet should be classified as Other deposits (F29)" A clarifying sentence can then be added, "In contrast, off-balance-sheet restricted mudaraba deposits should be treated as a separate institutional unit, probably classified as a nonbank investment fund."

¶ 26.61 A clearer statement about off-balance-sheet Mudaraba and statistical implications is needed.

¶ 26.62 This paragraph on sukuk should mention the current intense activity developing in tradable digital 'tokens' that provide rights in underlying assets. Islamic tokens can be expected to develop; whether they politely fall into the sukuk category, or present some other alternatives, remains to be seen. Perhaps they could be mentioned in one of the bullet points in the paragraph.

¶ 26.76 An additional statement would be useful on treatment of restricted mudaraba if ***not*** "considered part of own funds of the financial institution".

¶s 26.97 and 26.98 The last clause of paragraph 97 "though Islamic accounting standards may suggest otherwise" is floating and seems like it could appear elsewhere. It might fit nicely as the introductory sentence of paragraph 98 "In contrast, Islamic accounting standards may suggest otherwise."

¶ 26.109 Question about the last sentence – who is at risk for loss or destruction of the underlying nonfinancial asset? Should the answer be added here?

Addenda

- **Differences between Islamic and conventional finance**

Economic statistics in economies with dual conventional-Islamic banking systems can be hampered by the intermixture of the two types of banking institutions. The standard set of macroeconomic statistics (GDP, balance of payments, monetary statistics, financial soundness indicators, etc.) includes both conventional and Islamic deposit takers without separate identification – the analysis and policy might be impaired to the extent there are behavioral differences between the two types of financial institutions.

There are many possible conditions that could result in different behaviors, including that Islamic Deposit Takers (IDTs) (i.e. banks) ....

- cannot use standard market financial instruments based on interest returns, including many types of monetary policy instruments,
- can be partially isolated from general financial market conditions because they are constrained to interact primarily with other Islamic IDTs and use of Islamic financial instruments,

- often remunerate depositors/investors using profit-sharing instruments with variable returns that differ from conventional interest-paying accounts,
- lack access to conventional liquidity instruments and thus often bulk up capital accounts to deal with financial stresses, which can affect measured capital adequacy ratios, and
- can face shortages of Shari'ah-compliant High Quality Liquid Assets (HQLA) needed to meet supervisory requirements.

(2) Islamic and conventional finance statistics peer groups.

Given possible impacts of such factors, the IMF has stated "For analytical purposes, it is recommended that countries with dual banking systems compile separate aggregate data for Islamic banks, in addition to standard monetary statistics, to allow monitoring of specific indicators for the Islamic banking system such as growth in financing and sources of funding. Furthermore, guidance is also being developed for compilers of FSIs in countries with Islamic financial institutions in the context of updating the IMF's *FSI Compilation Guide."* (IMF. *Ensuring Financial Stability in Countries with Islamic Banking* January 2017.)

Forthcoming guidance on Islamic finance in the on-going revision of the SNA (Chapter 26 – Islamic Finance) will benefit statistics compilers. Also, separate peer groups for conventional banks and Islamic banks can be constructed. Peer groups can facilitate empirical analysis of possible different behaviors, enhance surveillance of the economy, help evaluate differences in policy effectiveness, and inform on possible new legal or supervisory standards.

Separate data on IDTs are already collected by the Islamic Financial Services Board (IFSB). The IFSB further collected separate data on stand-alone IDTs and Islamic windows operated by conventional banks. The separate windows data are collected because their ties with the conventional parent enterprise might affect their capital structure and liquidity support mechanisms, and because of likely cross-border transactions of many windows with nonresident affiliates of their parent.

The Islamic finance peer group data can be ….

- Analyzed in isolation. These data can be used to understand the behavior of the subsector, for supervision, for analysis of sector soundness or risk, or to design appropriate monetary policies. *Or…*

- Translated into conventional equivalent data for the Islamic subsector (usings mappings that could be constructed from the SNA chapter or from the IFSB). The step can either highlight the role of Islamic finance within the full national economy, or compile separate Islamic finance and conventional finance peer groups to permit direct comparisons.

Compiling Islamic finance and conventional peer groups would be a specialized task involving international guidance, advice by Islamic financial and accounting organizations, and expertise of national compilers familiar with national practices and variations. Consideration might be given to launching an Islamic finance thematic account or compilation guide on statistical coverage of Islamic finance and its integration into national statistical frameworks.

(3) Proposed redraft of ¶s 26.6 – 26.9 affecting IU treatment of certain Islamic instruments

26.6 To adhere to these principles and to simultaneously accommodate the financing of economic activity, Islamic financial corporations have developed various financing arrangements that are mapped to more generic financial instruments. These financing arrangements are often based on trading models or profit and loss sharing models involving underlying real non-financial assets. Economic ownership of any non-financial assets and changes in economic ownership (discussed in Section F) are fundamental to the compilation of the macro-economic statistics – the recording of such non-financial assets may be reflected on the balance sheet of the Islamic financial institution (or an entity that it owns when the legal ownership is acquired), but this may not be the case for economic ownership as applied in the sequence of economic accounts. Economic ownership of any non-financial assets and changes in economic ownership are discussed in Section F and are closely related to the characteristics of the financing instruments discussed in Section E.

26.7 Moreover, segregation of Shari'ah-compliant activities from non-compliant activities and funds (i.e., those not following Shari'ah principles) can affect the recognition and classification of institutional units (IUs). This gives rise to some specific treatments, as below;

First, the financial statements of Islamic windows of conventional financial institutions are separated from the financial activities of their conventional parent. In principle, in frameworks focusing on the structure and behavior of Islamic finance, windows should be *de*consolidated from the accounts of the conventional entity's financial balance sheet; thus, separate Islamic and conventional IU's exist.

Second, off-balance sheet restricted investment accounts (of banks and other depository corporations) that comply with Islamic finance accounting standards are to be classified as separate IUs.

Third, there is a distinctive arrangement in which a charitable institution contracts with a fund manager to establish a dedicated, open-ended asset Waqf Fund managed according to Shari'ah principles, to which the public can make donations by "purchasing" units of the fund. The charitable institution is the beneficiary of the fund; that is, it is the economic owner of all the units of the fund. Under the agreement, the fund will charge fund management fees and will reinvest or distribute specified amounts of the profits to beneficiaries. The donor's investment in the fund constitutes an irrevocable donation to the beneficiary, and the function of the fund is to provide financial management of the beneficiary's portfolio of assets. These funds are required to keep a complete set of accounts and constitute separate IUs.

Fourth, there are various schemes in different countries for supporting or enabling pilgrims to save for, or to undertake the Islamic pilgrimage (or Hajj). The term Hajj Fund is used to describe the case of a market enterprise that undertakes, as a significant part of its activities, the management of long-term savings open to individuals intending to undertake the Hajj pilgrimage in compliance with Shari'ah principles. Such funds are considered as IUs if they are legally established entities with an autonomous management and keep a complete set of accounts and are classified separately within the financial corporations' sector, with the specific subclassifications determined case-by-case.

Hajj funds are usually treated as non-money market investment funds. However, for Hajj savings to meet the conditions of deposits, the fund would usually be a regulated deposit-taking entity (bank or similar entity) with the principal value of the deposit typically protected to some degree.

Although a Hajj Fund might undertake certain secondary non-financial activities, such as the provision of travel, accommodation, and related services to pilgrims, these activities are expected to be far less significant than its financial activities. Such non-financial activities would normally involve a separate institutional unit outside of the fund.

- **Benson Sim**

Paragraph 26.38-it is not clear why this paragraph has a reference to paragraph 7.183 which discusses how to calculate reference rates in instances where there are negative estimates of implicit financial services on loans and deposits. Also, it may be useful to specify examples of evidence which would justify the use of different reference rates. In addition, this topic should be added to the post 2025 SNA research agenda if it has not been added.

- **Benson Sim**

The title of section D should be "D. The nature of returns on Islamic instruments in the Allocation of Earned Income
Account".

- **Benson Sim**

Paragraph 26.106-to make things simpler, it may be better to change "may become the legal and economic owner for that period only" to "may be the owner for that period only".

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

3 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

2 Comments

- **Karen Kuhn_South Africa RB**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

2 Comments

- **Karen Kuhn_South Africa RB**

No

- **Nikky Toh Singapore Department of Statistics**

No

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4 Do you have any other concerns with this chapter?

3 Comments

- **Russell Krueger _United States IMF Retired**

Substantial comments (entitled 'Comments on Chapter 26 – Islamic finance') have been sent directly to the UN at sna@un.org. Economic differences between Islamic and conventional finance are emphasized which suggests that Islamic finance should also be analyzed in a separate peer group or thematic account.

- **Karen Kuhn_South Africa RB**
    - Paragraph 26.16 - Hedge funds are part of non-money market investment funds. Hedge funds that make use of leverage strategy or shot selling should not be part of Islamic Investment funds.
    - Paragraph 26.19 - Suggestion to also add in this paragraph that "Islamic corporations (other than banks) that are engaged in lending activities are part of S125"

    - Paragraph 26.20 - Suggestion to reword the last sentence in this paragraph as “Financial auxiliaries may also relate to managers of investment funds or collective investment schemes, but not the assets they manage”

- **Nikky Toh Singapore Department of Statistics**

No

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

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4. Do you have any other concerns with this chapter?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

Chapter 27: Contracts, leases, licenses and permits

1 Comment

- **Noemi Frisch _Israel ICBS**

27.8 – 27.14 The heading is changed to finance leases, should it not be changed in the paragraphs too?

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

There is potential to mention Data in section D – Sharing assets, possibly in para 27.56 which discusses the case where participating units are resident in difference economies.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mark de Haan Netherlands**

27.12 I find this confusing language, it suggests a claim has been progressively built up. As I understand, this is not the case. A suggestion: "…extinguishing the financial claim progressively over the leasing period".

27.15 In reality the resource exploitation arrangements between government and extractor may be more complex depending on other factors than income streams alone. For example, is it still allowed to apply a split of assets when the government is the entity determining production volumes from on year to another?

27.27 This anomaly has already been picked up by others: land cannot be subject to capital formation.

27.31 My interpretation of this guidance is that also rents on wind must be split if appropriate. This brings me to the following question. In the case of wind turbines on land, how should we make the necessary distinction between payments associated wit the use of land and those associated with the use of wind? Only the latter should be split, correct?

27.60 Particularly in oil and gas mining, the event of a government *giving up a natural resource* will not often occur. It takes several years of mineral exploration before production starts. Mineral exploration is an expensive activity. This implies a pre-arrangement of sharing expected benefits between extractor and government has already been settled prior the coming into being of an asset in a balance sheet. And when it does, it will probably emerge simultaneously and proportionately (based on income share arrangements) in the balance sheets of government and mining corporation. Under such a scenario there is no giving away of public property. It would be worthwhile putting in the 2025 SNA the ocurrence of such capital transfers in the right context.

27.79 Under the EU ETS, shares of freely provided emission permits are still substantive. In this way businesses in manufacturing industry are granted a transition period in which to adapt to carbon pricing. The 2025 SNA may argue that freely provided permits have zero value. But that is beyond reality. The reality is they do have a market value. And for that reason it is difficult to imagine the 2025 SNA recommends to simply ignore the underlying transaction of such transfers in kind. If a permit with a positive market is provided for free by a government to a corporation, this event constitutes in fact a capital transfer. If the intention of the 2025 SNA is to ignore such transfers, the reasons behind such choice should at least be motivated and explained explicitly. Sorry, but I cannot resist to mention that from a carbon tax analysis point of view, the 2025 SNA guidance on pollution permits is second-best.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Overall, the chapter does a good job of working through natural ownership issues even if it is not comprehensive. It could make clear that often historic legal underpinnings for natural resources are complex and NSIs should consult experts to fully understand their own context.

It could be useful to reference the changes in treatment of natural resources in chapter 13.

- **Karen Kuhn_South Africa RB**

Yes

- **Jorrit Zwijnenburg_OECD**

Throughout the chapter, at least six terms are used, i.e., contract, lease, license, right, permit, permission, that seem similar in meaning, but used in different situations. It would be helpful to use fewer terms if possible and to clearly define them and to clarify any differences.

27.16: This paragraph introduces three options. It would be useful to refer back to these options later on in the text to provide full clarity what needs to be recorded in what situation. This is sometimes not fully clear from the text, for example in relation to land (see comment in paragraph 27.26) and radio spectra (see comment in paragraphs 27.51 and 27.52). It may also be helpful to include a decision tree to guide readers in how to arrive at the correct recording.

27.26: It is not fully clear how to interpret this text in relation to the three options specified in 27.16, i.e., does it also apply to the third option in which the asset is split between the user and the legal owner? Or does it only refer to the first option where the legal owner may permit the resource to be used to extinction?

27.31: It is unclear how to interpret 'permissions' in the text "payments associated with permissions treated as payments for land". There may be a permission to construct a wind turbine somewhere, which seems different from regular payments to the owner of land for using the land (with the latter being rent payments).

27.32: We suggest deleting the first sentence as it looks confusing and inconsistent with the remainder. In that regard, timber resources consist only of work-in-progress, whereas the expected harvests relate to the underlying asset.

27.34: We have two concerns with this paragraph: 1) It would be useful to distinguish between transactions in standing timber (stumpage price) which constitutes the sale of an asset (in this case work-in-progress) and rights to harvest (which can be for several years and sometimes called stumpage fees, and which could lead to a split asset approach (for the underlying asset)). 2) it speaks bout rent from harvesting, but strictly speaking the benefits consists in the growth of trees, as this is the output recorded in the accounts.

27.50: The text could be made clearer by rephrasing that "only when the licence is granted indefinitely, the payment is recorded as the sale of the spectrum".

27.51: This paragraph introduces the term 'permit'. It may be useful to explain this term, also in relation to other types of leases, licences and contracts. Furthermore, it is not clear how to interpret the text in relation to the three options laid out in paragraph 27.16, i.e., it is referring to the sale of an asset, but only explicitly mentions the sale of a permit. However, would it possibly also lead to the creation of an asset related to the (use of the) radio spectrum, in view of the split asset approach as referred to in 27.16. This may need to be clarified.

27.52: Does this refer to any situation where a licence is recognized (so also under 27.51)?

27.55: It may need to be specified what type of asset is referred to when speaking about "such that a sale of an asset is recorded" as this seems to be a different type of asset that is referred to when speaking about "then a separate asset, described as a permit to use a natural resource, is established". And it is not clear how this text relates to the three options presented in 27.16, as in case of the first option there is just an outright sale of the asset itself and no creation of a licence or did we misunderstand?

27.59 and 27.60: Some further explanation could be added how the depletion costs are obtained. It may also be considered to just focus on explaining the splitting of ownership, assuming no depletion?

27.81: Please specify what n refers to in 'year t+n'.

27.84: It would be good to reiterate that the atmosphere is not considered an asset in the SNA, and hence that we are treating emission permits here as permission to undertake an activity, instead of a right to use a natural resource. In that regard, it would also be better to refer to "permissions to generate air emissions" instead of "permissions to use the environment as a sink", particularly also as the use of the word sink goes against SEEA.

27.95: Reference is made to the fact that these assets should only be recorded ”when the lessee does actually exercise their right to realize the price difference”. Why do we not simply call them ‘marketed operating leases’ in that case? ‘Marketable’ clearly implies a potential, not necessarily an actual use.

- **Lenka Valenta_Germany FSO**

27.5-27.7 Please explain whether operating lease applies to produced (cultivated) natural resources, as the definition of the operating lease refers to “the use of produced non-financial asset”. See also our comment below.

27.15 to 27.24 As mentioned already above (under the operating lease), please clarify the treatment of produced natural resources under lease arrangements, e.g. whether operating lease applies to them or not. This is especially important in the context of timber resources discussed in paras 27.32-27.35.

27.19 The third option – there is no creation of an asset, but the split of total value of a natural resource between two parties. This option 3 (involving split asset approach) refers to "natural resources", thus the concept could be theoretically applicable to all natural resources, i.e. also to (some types of) land. If the conditions mention in option 3 apply to land - one can calculate resource rent for land and then compare it with rent and in case of differences a split asset approach could follow. Is that right? Please clarify.

27.30 If the split asset approach is applicable also to renewable energy resources, which asset is supposed to be split here, only a renewable energy resource or also land? (also, the rents must be split accordingly)

27.29 says: “…*Natural <u>resource rent paid on rights</u> to use mineral and energy resources should be split between amount paid in relation to non-renewable mineral and energy resources and renewable energy resources. Where possible, the rent paid on specific high revenue generating resources (e.g. copper, oil) should be recorded separately*”.

These sentences are not clear. “Resource rent” is never paid (unobservable), what is paid is rent (D.45). Theoretically, the rents (D.45) paid on non-renewable mineral and energy resources should be always separately identified by type of these resources (i.e. separately for oil + gas, coal, …), otherwise it would not be possible to perform the split of a natural resource, for which rent is one of the inputs (to be deducted from the resource rent) to determine the shares of government and extractor. The same applies to renewable energy resources, i.e. rents and resources rents should be estimated for each resource in the asset classification.

27.32 It should be clarified how "timber resources" are defined, i.e., if it is a composite asset (inventories and land); or timber resources are just inventories, while there is then yet another asset - (forest) land.

Then the first sentence of para 27.32 says: "*Timber resources are a type of biological resource that are valued in terms of the expected harvesting of timber*",

while the last sentence is: "*… the value of forest and other land incorporates the value of future benefits from the harvesting of timber*".

Please clarify, we are not sure what is the difference.

27.34 In this para a split asset approach is suggested: "*…Where the natural resource rent from harvesting timber is greater than the payments of rent, the total value of the timber resources and the forest land should be partitioned following the split-asset approach*".

First, "the total value of the timber resources and the forest land" (here presented presumably as a composite asset?) must be divided and classified partly under land and partly under inventories. Second, which asset is supposed to be split between legal owner and extractor? Please clarify.

27.38 As regards split asset approach for fish stocks, no underlying asset is mentioned in contrary to Ch13, para 13.21 (on natural growth of uncultivated biological resources), which says: "*The value of these biological resources may consist of two elements: the natural growth of fish itself, and the value of the underlying asset (i.e., the geographical area through which the fish migrates). In the latter case, the value is often encapsulated in the value of the quota put in place…*".

Therefore, it should be better explained what is meant to be split here, as it is not obvious.

27.55 Please elaborate more on permits to use natural resources to be classified as contracts, leases and licences. This para refers to criteria in section C (but there are many), so it would be useful to refer to concreate ones.

In addition, do we understand well that this treatment is now restricted to cases of land and radio spectra? Please clarify why fish and timber were excluded.

Finally, please check the current version of the Glossary for 2025 SNA for permits to use natural resources as follows: "*Third-party property rights relating to natural resources, which are transferable. An example is where a person holds a fishing quota and they are able, both legally and practically, to sell this to another person, SNA code AN.212*".

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

Some of the terms used are not consistent with the terminology found in chapter 21. We suggest to review all chapters to ensure that the changes to specific terms have been incorporated, for instance, "finance lease" instead of "financial lease" in paragraphs 27.3, 27.8, 27.9, 27.10, 27.11, 27.13, 27.23, 27.54, 27.73, 27.93.

- **Rosie Maslin_UK Government Response**

27.16 The UK recommends re-wording to explain that the intention here is not to give an exhaustive list but to outline the most common and useful forms to discuss.

27.22 The UK questions whether this would be true in practice. The government cannot make use of that quota directly – does not sell it at market rates and the fisherman has a legal right to be offered the quota.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

Para 27.29: “The full natural resource rent can be estimated [...] including services related to the capital used in production, but excluding the depletion (for more details, see the annex to chapter 4).” Add the bit in red for consistency with para 4.317, which sets out the calculation of resource rent, from output, and states in the final step that “resource rent (=depletion plus return to natural resources)”.

Para 27.58: “The recording in these situations should follow the split asset approach as discussed above and in chapters 4 and 11.” But it’s not clear that Chapters 4 and 11 add anything to what is already in Chapter 27 – perhaps this reference should be removed?

- **Jorrit Zwijnenburg_OECD**

According to Chapter 21, ‘financial lease’ will be replaced by ‘finance lease’ in the 2025 SNA. However, the term ‘financial lease’ is still used many times throughout the draft. You may want to check and replace these.

27.44: It would be logical to treat depletion due to illegal fishing as depletion and not as OCV, as it does not matter for the production boundary whether an activity is legal or illegal.

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4 Do you have any other concerns with this chapter?

7 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

The draft SNA does not seem to make clear that renewable energy resources can be subject to the split-asset approach. Chapter 27 explicitly mentions the approach for mineral and energy resources (non-renewable), timber and fish, but only addresses renewable energy resources in para 27.31, and is doesn't seem to mention the split-asset approach.

Definition and scope of resource rent

The difference between rent and resource rent needs to be explained more clearly. The terms are included in the SNA Glossary:

- **Rent** – Income receivable by the owner of a non-produced non-financial assets (the lessor or landlord) for putting the assets at the disposal of another institutional unit (a lessee or tenant) for use in production.
- **Economic rent. Resource rent** – Surplus value accruing to the extractor of a natural resources, or a user of an asset more generally, calculated after all intermediate costs, labour costs and the costs of fixed capital used have been taken into account.

So resource rent is defined as the surplus accruing to the extractor.

- But this is inconsistent with 27.59 -60 and Table 27.1 where the term is used in several ways – to refer to the total income flowing to both extractor and owner, to the flow from the extractor to owner, and to the amount appropriated by the extractor, ie the surplus. In fact the term resource rent is used in all three ways throughout the draft SNA
- There is a general lack of clarity around the accounting relationship between the rent paid by the extractor to the owner, the resource rent earned by the extractor and the split of the resource rent between owner and extractor in the split-asset approach. In particular para 4.317 appears to be inconsistent with paras 27.59-60 and Table 27.1.

We understand paras 27.59-60 and Table 27.1 to be illustrating that:

Total resource rent (45) = rent paid to owner (30) + surplus resource rent appropriated by extractor (15).

Which appears consistent with 27.59 – "Rent on natural resources of 30 is paid to the government as recorded in the distribution of income account and this is all considered depletion …"

But we also note that total depletion is 45 in Table 27.1, and not 30, and is split between government (30) and extractor (15). It looks as if total depletion is calculated as being equal to resource rent.

- If this is the case then it appears inconsistent with 4.317 which ends with:

resource rent = depletion + return to natural resource.

6. Which means that if resource rent is equal to depletion then the return to the natural resource is zero.

- Para 17.47 is also inconsistent with 4.317 in that it suggests that resource rent is the residual after the payment of rents on non-produced non-financial assets. This may be true from the extractor's perspective but this is not made clear.
- We also note the discussion in WS.14 around the historical (and current) lack of clarity or agreement about the term "resource rent" (below). The redrafted SNA needs careful review to ensure that these inconsistencies do not persist.

WS.14 para 37**.** Statistical manuals used to compile government finance statistics or national accounts assimilate resource rent to rent (2008 SNA, para. 7.154; GFSM 2014, para. 5.125; and ESA 2010 para. 4.72). It appears clear that resource rent in all these manuals is the income receivable by the owner of the natural resources (the lessor or landlord), from the lessee, for putting the natural resources at the disposal of the lessee. While BPM6 does not reference resource rent, it does define rent in the same way as the other statistical manuals (para. 5.60b).

Para 38: In contrast to this, the OECD glossary of statistical terms defines resource rent somewhat differently as: "The economic rent of a natural resource equals the value of capital services flows rendered by the natural resources, or their share in the gross operating surplus; its value is given by the value of extraction. Resource rent may be divided between depletion and return to natural capital." Thus, economic rent is here defined by reference to the profit of the lessee (rather than to the amounts payable to the lessor), although with reference to "their share" in the gross operating surplus. It is not fully clear whether the lessor's share in the gross operating surplus, after remuneration of all other factors of production, would equal the amounts payable to the lessor under the terms of the resource lease. The System of Environmental-Economic Account Central Framework (SEEA-CF) goes however further by showing how resource rents can be derived from SNA aggregates. Under the SEEA-CF, resource rents are also known as economic rent: "the surplus value accruing to the extractor or user of an asset calculated after all costs and normal returns have been taken into account". Table 5.5. of the SEEA-CF shows how resource rent can be derived, in particular, it notes that it is necessary to take into account the effects of any specific taxes and subsidies that relate to the extraction activity.

Other terminology

- The term **<u>"natural resource rent"</u>** is used throughout Chapter 27 but only once elsewhere, in Chapter 2, para 2.70. This seems inconsistent – stick to either resource rent or natural resource rent. This comment is analogous to the point about "natural resources leases" above".

2.70 – " … both the SEEA and the SNA incorporate measures of environmental assets including the value of natural resources, the changes in value and volume of these resources (including through discovery, depletion or catastrophic loss) and associated income streams (including flows of natural resource rent). …"

27.29 –"Most commonly, mineral and energy resources remain in the legal ownership of general government, with users extracting mineral or energy resources under an agreement where the payments made each year are dependent on the amount extracted. The payments (sometimes described as royalties) are recorded as rent. The full natural resource rent can be estimated using the residual value method …"

The term **<u>"rent on natural resources"</u>** – very similar to "natural resource rent" is also used, albeit only twice.

27.59 – "Rent on natural resources of 30 is paid to the government as recorded in the distribution of income account and this is all considered depletion …"

- This seems like a typo as it refers to the worked example in Table 27.1, where Natural resource rent has a value of 30.

33.40 – "Rent relates to the income receivable by the owner of a non-produced non-financial asset … An example where rent on natural resources may be recorded in the international accounts may be short-term fishing rights in territorial waters provided to foreign fishing fleets …"

The Glossary includes the following: **<u>"Natural resource leases</u>** – Contractual agreement whereby the legal owner of a natural resource makes it available to a lessee in return for a regular payment recorded as rent."

- But the term "natural resource lease" is only used once in the draft SNA, in Table 21.9. Whereas the 2008 term "resource lease" is still used throughout. Should the SNA be updated in line with the Glossary, or the Glossary corrected?

- **Celestino Giron_ECB**

The recommendations on emission permits (27.75 to 27.85) do not address the cases of multi-country trading schemes for those permits. The treatment of those schemes will have to be developed regionally (for instance in the European System of Accounts in

Europe) consistently with the SNA. It would then be important that the SNA doesn´t close any door that might be needed to accommodate highly developed secondary markets. Therefore, it would be preferable that the wording is more open to the possibility of market valuation, including for permits allocated for free.

Jorrit Zwijnenburg_OECD

It would be good if "natural resource rent" could be changed into "resource rent"; we also speak about 'resource lease' and not about 'natural resource lease'.

27.30: Reference is made to "future capital services", but 'future' can be deleted from this as resource rent only reflects the current accounting period.

Lenka Valenta_Germany FSO

Rights to use a natural resource - General comment: the difference between "rent (D.45)" and "(natural) resource rent" (capital services of a natural resource = depletion + net return to natural resource) should be recalled, as these are key elements in discussion on rights to use a natural resource.

27.22 (d) "underlying asset" in this context should be replaced by "natural resource".

27.29 - 27.31 The text in these paragraphs should be split in 2 parts: 1. Non-renewable mineral and energy resources and 2. Renewable energy resources, as it is difficult to understand what is described here, i.e., what the common features for both are and what applies just to one of them.

27.31 For renewable energy resources the last sentence says: "…*The treatment of any payments associated with the permissions will be the same as for payments for the use of land*".

What does that mean exactly? Land is usually under resource lease, i.e. rents to be recorded, or what is to be considered here? Please clarify.

27.36 In the first paragraph it should be mentioned that the following text covers primarily uncultivated biological (animal) resources yielding once-only products like fish in open seas, so to make it clear where it belongs in the asset classification.

Table 27.1

- In the table should be "rent (D.45)" paid by extractor and received by government and not "natural resource rent".

- "degradation" should be deleted from the whole Table 27.1, as it is a complex concept not elaborated in this version of the SNA.

- Depletion/degradation should be deleted from OCV of assets and liabilities account (even though is zero), as it might be confusing.

Chapter 28: Non-financial corporations

1 Comment

- **Noemi Frisch _Israel ICBS**

The title has been changed to "Non-financial corporations". But the chapter still is mostly about corporations in general. It also says in 28.2 : "This chapter discusses aspects particular to corporations, many of which are common to both the financial and non-financial corporation sectors." Perhaps it would be useful to have one chapter called "Corporations" with subheadings as needed for non-financial and financial corporations instead of two chapters.

28.59 "There is a close relationship between the SNA and IFRS." Is that really true? The wording in SNA 2008 was perhaps better: "The principles underlying the IFRS are in most cases entirely consistent with the principles of the SNA."
28.60 The objective of SNA should also be written in this paragraph as it is in the table:
"Allow users of macro-economic statistics to monitor and analyze the performance of the economy."

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

5 Comments

- **Mark de Haan Netherlands**

Comment: 28.18B could use further clarification. The first paragraph of 28.18 states 'A merger implies that, as a result of the operation, only one entity will survive'. 28.18B reads as if a subsidiary is acquired *and both companies continue to exist* which looks more like FDI (paragraph 28.33).

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Joao Fonseca**

Paragraph 28.63 - This paragraph refers to operating leases for lessees and operating leases with a term of more than 12 months in the context of IFRS. These statements are incorrect. According to IFRS 16, *Leases*, lessees no longer classify leases as either an operating lease or as a finance lease and the 12 months reference is related to recognition exemptions for lessees, not to operating leases for lessees. Therefore, our suggestion is to redraft the paragraph as follows in tracked changes:

"Three particular areas where the IFRS adopts approaches somewhat different from the SNA are in the area of the recognition of holding gains and losses as income, in the recording of provisions and contingent liabilities, and in
recording operating leases differently for between lessees and lessors (where the IFRS has a treatment that is inconsistent between lessors and lessees). As discussed in paragraph 14.114, certain types of provisions should be recorded as supplementary items in SNA balance sheets. For operating leases with a term of more than 12 months, the IFRS requires the lessee to recognize an asset and associated liabilities, even though those assets and liabilities are also recognized by the lessor. Under IFRS, lessees adopt a right-of-use model where they recognize a right-of-use asset and a lease liability, except for short-term leases (leases for 12 months or less) and leases of low value assets, and lessors adopt the risks and rewards incidental to ownership model where they classify each of its leases as either an operating lease or a finance lease. The SNA treatment of operating leases is based on the concept of economic ownership and treats operating leases, regardless of duration, as not involving a change of economic ownership (see section B of chapter 27) for both lessees and lessors, and both classify each of its leases as either an operating lease or a finance lease."

Paragraph 28.64 – The *Preface to International Public Sector Accounting Standards* refers to "public sector entities" the entities to which IPSAS are designed to. Therefore, our suggestion is to redraft the paragraph as follows in tracked changes:

"In addition to the IFRS for private corporations, the International Public Sector Accounting Standards (IPSAS) perform a similar function for government bodies public sector entities. There is a discussion of the IPSAS in chapter 30."

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

The chapter goes straight into talking about demography without definitions of NFCs. The Uk would encourage this inclusion.

There is useful information on births and deaths. The UK question whether this would be more of a register issue than core NA.

The UK encourages moving section C before section B as it deals with the definition point, the core NA point and refers to the relevant earlier chapter (5).

Section D3 doesn’t include much on how to record.

28.49, more guidance on transfer pricing would be helpful.

Section F doesn't seem to fit in the SNA. The recording of bad debts is already addressed in chapter 14 and may not need to be repeated here.

- **Karen Kuhn_South Africa RB**

No

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4 Do you have any other concerns with this chapter?

5 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Can unincorporated households enterprise be classified into non-financial sector?

There exists country specific registration of enterprises for example registration of incorporated companies into office of company registrar and unincorporated household enterprises into local governments or designated government authorities. In such condition, criteria for inclusion in non-financial institutional units be clearly defined.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

In general the use of illustrations, diagrams and tables were lacking in this chapter. And discussion of the data variables was lacking.

Chapter 29: The financial corporations sector

4 Comments

- **Tatsuya Sekiguchi_Japan NA**

Paragraphs: 29.54 and 29.55 (ETF of NLCA)

Physically-backed exchange traded funds (ETF) which hold NLCA as their main assets have been approved by the U.S. Securities and Exchange Commission (SEC), in addition to the already approved and traded future-based ETFs of NLCA. Hereafter, the former is called "Spot ETFs of NLCA" and the latter "Future ETFs of NLCA". Spot ETFs of NLCA have potential to be a common investment choice.

Clarification of the sector classification of these ETFs is necessary. In Chapter 29 (paragraph: 29.55), investment funds are explained in the following way: MMFs and non-MMF investment funds issue shares or units in the fund and invest predominantly in financial assets. According to this explanation, Spot ETFs may not fall into financial corporations sector, such as Non-MMF investment funds (S124). This is because the main assets of Spot ETFs of NLCA are non-financial assets. One of the examples in draft chapter 29 (paragraph: 29.54) explains that the funds which hold real estate as their major assets are non-financial corporations and are excluded from Non-MMF investment funds. As discussed above, it seems that Spot ETFs may not be classified into financial corporation sector, but this needs to be clarified in the 2025 SNA or supplementary documents, such as a compilation guidance. On the other hand, it may be clear that Future ETFs of NLCA are classified into the financial corporations sector, as they are one of the Non-MMF investment funds, holding financial derivatives of futures as their main assets.

- **sna comments received by email**

From:

- **Benson Sim**

It may be useful to explicitly mention deposit-takers which provide microfinance in paragraph 29.47 or 29.49.

- **Benson Sim**

Paragraph 29.78-it may be useful to mention that S129 includes the separately constituted pension funds of international organizations as they are residents
of the economic territory in which they are located or, lacking a physical presence, residents of the economy where they are incorporated or registered. For more information,

see paragraph 3.79 of the MFSMCG and paragraph 2.42 of the handbook on financial production, flows and stocks.

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Chapter 29 is an improvement on Chapters 12 & 22 in that Supplementary items are much more clearly laid out than in the other two chapters. The Supplementary tables at the end of the chapter are really useful and show the links with previous workstreams on DGI-II.5, and by implication the work done by the FSB. There remains vagueness on what is required by SNA 2025 and what is Supplementary. Two examples that could do with greater clarity are 29.30 and 29.32.

- **Karen Kuhn_South Africa RB**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The chapter does not offer enough compilation guidance, reading at times like a discussion document: e.g., sentences such as “financial corporations have taken on increased importance over years (29.1) and the global financial crisis… “has led to an increased interest in developments in the financial world” (29.81) – financial corporations have been important for many centuries, it is the risks that evolve. “fintech is a relatively new trend” (29.26) Some of these risks becoming outdated and are not clear to the compiler.

In places, the chapter does not clearly present what is trying to be measured – nationality statistics can be compiled using different consolidation methods – see Financial Soundness Indicators Guide, but none are outlined in the chapter.

Despite referencing financial stability analysis many times in in the chapter, the chapter seems to not answer the compiler question: how can national accounts data support financial stability and what data series, with clear guidance if not already covered in the SNA, should be compiled? Table 29.1 and 29.2 do not provide sufficient information.

There is considerable repetition of text between Chapters 5 and 29 there is scope to reduce the repetition by cross referencing.

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Para 29.13: “Similarly financial institutions rarely offer non-financial services.” This part should be moved after “…However, in such cases the credit is usually provided by a subsidiary which is classified in the financial corporations sector.”

Para 29.14: “Financial intermediation involves financial risk management as well as maturity and liquidity transformation, where the institutional units incur financial liabilities (accepting deposits or issuing bills, bonds or other securities or insurance liabilities) or uses own funds toand acquire mainly financial assets (making loans and advances, or purchasing bills, bonds or other securities)”. The change is needed as banks mainly create liabilities when creating assets (loans) or buying securities, they do not issue liabilities prior to lending. This is a simultaneous process which should be reflected in the drafting.

Para 29.44: for clarity, we suggest the following edits: “Monetary policy is exercised through a variety of means, including: […] and exchange rate policy; imposingaltering bank reserve requirements; communicating to the public including throughand forward guidance and other communication activities. In many jurisdictions central banks also have a are responsible for financial stability, including through bank supervision analysis function, monitoring the financial positions (e.g. monitoring, liquidity, leverage, capital adequacy) of large financial institutions as well as assessing the financial risks and vulnerabilities ofand the economy more generally”.

Para 29.53: In the EU MMFs are often not transferrable. We suggest adding text in red: “… In some countries, MMF shares or units can be transferred by cheque or other means of direct third-party payment…”

Para 29.54, third bullet point: “…which hold real estate for rental activity as their major asset. In the case of hybrid real estate funds,…”. We suggest adding “for rental activity, as if Investment Funds purchase real estate mainly to generate capital gains, the gains would not impact value added (only valuation effects would be recorded) and as such, based on contribution to value added, they would not be considered as NFC. Hence the precision: holding of real estate for rental activity.

Para 29.79. Consider adjusting the text as follow for clarity: “…Banks may also have to follow certain accounting and supervisory requirements, such as those related to liquidity, capital adequacy, leverage ratios,having specific provisions for loan loss provisions, risk division ratio. es and general provisions on losses on other financial assets. …”

Para 29.95: It should be made clearer this paragraph that the subsequent paras refer to MFS according to MFSMCG and not, for instance, on Monetary Financial Institutions and Market Statistic Manual (European Central Bank) still referred to in 29.95. We suggest the following edits: “This section discusses the main similarities and differences between the

SNA and the MFS. Further detail on monetary and financial statistics can be found in according to the Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG), International Monetary Fund."

Para 29.98: add bit in red for precision: "For monetary policy purposes, the focus is on the consolidated data for depository corporations and money market fund shares."

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

There is a difference in the definition of a central bank (SNA 29.39, SNA 5.155, and BPM 5.155) as 29.39 includes a fifth bullet.

Retail banks are referenced in SNA 29.47 but not in SNA 5.160 and BPM 5.160.

In SNA Chapter 29, the breakdown in 29.89 doesn't seem to align with SNA table 29 the latter implying the third subgroup in SNA 29.89 is a subset of the second subgroup.

Electronic money institutions have a qualifier in SNA 5.160(f) and BPM 5.162 but not SNA 29.51. BPM 5.162 uses the term “depository corporations” which is not defined. The term is also used in BPM Chapter 26. Should “deposit-taking corporations” be used instead?

Peer-to-peer lending companies are referenced within financial ancillaries in SNA 29.69 but not SNA 5.178 and BPM 5.178.

SNA Chapter 29.20 speaks of interest being “paid”. It should accrued – this is a mistake carried over from 2008 SNA. BPM is correct in using “payable” – BPM 11.119.

SNA Chapter 29.39 and 40 cover supervisory agencies. In 29.39, if the supervisory agency is a separate institutional unit it is a financial auxiliary. In 29.40 it is only a separate institutional unit if it is affiliated with government or other sectors. What is meant by “affiliated with other sectors” and why the qualifier in 29.40 but not 29.39?

SNA Chapter 29.48, in the section on deposit-takers, states that “merchant banks….may also be included in this subsector.” What criteria does the compiler use to decide whether to include within the deposit-taking subsector, or not? What is meant by “largely classified” later in the same paragraph? Is the intent that the compiler subdivides the activities of the merchant bank?

SNA Chapter 29.54 does not define what is a non-MMF investment fund, but rather defines what it is not. In contrast BPM and SNA Chapter 5 does define non-MMFs by what they are (5.165).

SNA Chapter 29.54 states that private equity funds focus on investing in unlisted companies. This is correct but it would be helpful, given the important role private equity firms play in financial markets, both here and in BPM 5.24, to briefly define what is a private equity company – one that is not publicly listed and traded.

The text in BPM Chapter 5.24, footnote 3 provides more detail on private equity, which could also be included in SNA 29.54. However, it is not clear what is intended in this footnote by “source of funds” – it reads as though the reference is to the liability side of the private equity balance sheet, but the rest of the sentence reads as though the text is referring to the asset side, despite “however” implying the same side of the balance sheet.

SNA 29.58 states that private equity funds are closed-end funds, while SNA 29.86 states that closed-end funds are traded on an exchange. But private equity funds by definition are not traded on an exchange.

SNA Chapter 29.77 defines insurance corporations as institutions that “offer various forms of insurance.....” This is a tautology.

SNA Chapter 29 does not include SWFs in the discussion of further institutional sector breakdowns (29.89), unlike BPM 7.73, despite their importance and the inclusion of principle 5 in the Santiago principles for SWFs.

SNA Chapter 29 does not refer to electronic traded funds (ETF), a common type of investment fund.

There is the continual use of the phrase “financial stability” in SNA Chapter 29 yet there is a lack of a clear definition of “financial stability” and of clear guidance on the data needed (e.g., 29.80-81). Chapter 29 also does not draw on past work – see IMF working paper 17/153 that provides a framework for financial stability analysis and can be drawn on to show how national data data can be utilised for this purpose, nor on current work in this field, such as the development of financial soundness indicators, reported by well over 100 countries to the IMF. If the intention is cover financial stability there needs to be a separate section in the chapter that covers these points, and as mentioned above, provides clear guidance on the data needed that are not covered elsewhere in the SNA.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

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4 Do you have any other concerns with this chapter?

8 Comments

- **Russell Krueger _United States IMF Retired**

Substantial comments (entitled ‘Comments on Chapter 29 – The Financial Corporations Sector’) have been sent directly to the UN at sna@un.org. It emphasizes three major transformative trends – digitalization, Islamic finance, and financial soundness and macroprudential analysis.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Celestino Giron_ECB**
    - The classification of funds investing in real estate as non-financial corporations (29. 54 third indent) poses compilation difficulties as those institutions are typically covered by sources that do not easily distinguish them from other funds (moreover, the predominance of domestic or foreign holdings would have an impact on their classification as non-financial corporations or financial corporations). Furthermore, from a substance point of view those funds provide investment support and act as financial intermediaries. It would be preferable to classified those funds as financial institutions as well.

- **Karen Kuhn_South Africa RB**

No

- **Russell Krueger _United States IMF Retired**

Comments on SNA Chapter 29 – The Financial Corporations Sector [1]

This new chapter for SNA 25 looks at the financial corporations sector and its components. The chapter rightly begins by noting the increased macroeconomic importance of financial corporations as the sector takes on new roles channeling funds through an economy.

It is a highly useful chapter but needs to be supplemented by further highlighting three major aspects of modern financial corporations;

Digitalization of economies and cryptoassets (such as bitcoin, central bank digital currencies, and many thousands of others) have fostered many new types of financial corporations and have changed the footprints of financial business.

Islamic finance, which is a significant variation in financial corporation behavior with a presence in perhaps a quarter of all countries.

Financial soundness and macroprudential analysis, which introduces new perspectives on corporations and their economic impacts and risks.

1. *Digitalization and cryptoassets*

The digital finance revolution has promulgated a variety of new financial instruments and corporations that should be covered in the chapter. The prefixes 'virtual-', 'digital-', or 'crypto-' are often associated with the new instruments and corporations.

In general, digitalization of economies is generating a wide new variety of financial corporations ('miners' of digital 'coins, exchanges and depositories, cross-border digital intermediaries and transfer facilities, service providers ('VASP's or 'CASP's – for virtualasset- or cryptoasset-, respectively) distributed ledger technology (DLT) centers, etc.. Vertical integration is digital finance is common; firms might produce and issue coins; validate coin transactions; 'mine' new coins, lend funds from the receipts; have proprietary holdings; act as exchanges or depositories; etc.

To clarify situations almost all SNA 25 compilers will face, the chapter can add some descriptions and discuss the financial vs. nonfinancial split (IT, communications, chips and hardware, etc.); intermediary vs. auxiliary split, etc..

Also, central bank digital currencies (CBDCs) are a central bank response to private digital instruments. CBDCs are financial instruments, but the operational frameworks for CBDCs are significantly blurred between the central bank, private banks, and other private financial corporations.

CBDCs for retail use by the general public and businesses often involve private banks or other financial corporations to handle outreach in order to draw on their expertise and promote market innovation – sometimes to the point that a private corporation effectively operates the system. This is particularly likely in smaller or lower income countries where the central bank lacks the retail and technical resources or expertise and thus engages private corporations as operators or even full-fledged issuers.

Conversely, some nonCBDC instruments (stablecoins, 'tokenized deposits', diverse retail payments systems) perform similar functions to CBDCs and might actively compete with them. The boundaries between CBDCs and competitor digital instruments might not be clear; for example, the Bakong 'CBDC' in Cambodia is an officially recognized digital 'stablecoin' issued by banks and backed by their reserves at the central bank.[2]

Decentralized Finance (DeFi) seeks to emulate regular functions of the conventional financial system using digital financial instruments using a global internet system based on recording and validation system (digital ledger technology – DLT similar to what is used for bitcoin).

Tokenization and Securitization is digital representation of assets (financial or nonfinancial) that permits their electronic trading.

This is a complex and rapidly developing market segment that will involve many new types of corporations. Some corporations will be clearly financial, but other supporting the system (computer data banks, software companies, telecommunications devices, etc.) might be nonfinancial. Central bank, general government, private players, and even nonresidents might be involved.

All countries now face or will face complex issues defining and compiling statistics and standard international guidance is needed. The vertical and horizaontal integration of digital firms might make classification difficult with similar looking firms classified in different classifications or even sectors. To provide compilers advice and to consolidate digital activities into a digestible package, a thematic account and Compilation Guide for virtual activities might be considered.

1. *Islamic finance*

SNA 25 has a new chapter on Islamic finance, but this chapter (#29) should include specific references to Islamic finance whenever significant compilation or definitional issues arise.

There are behavioral market and soundness differences between conventional and Islamic deposit takers, including among other factors, that Islamic Deposit Takers (IDTs) ….

- can be partially isolated from general financial market conditions because they are constrained to interact primarily with other Islamic IDTs and use Islamic financial instruments,
- cannot use standard market financial instruments based on interest returns, including many types of monetary policy instruments,
- often remunerate depositors/investors using profit-sharing instruments with variable returns that differ from conventional interest paying accounts,
- lack access to conventional liquidity instruments and thus often bulk up capital accounts to deal with financial stresses, which can affect measured capital adequacy ratios, and
- can face shortages of Shariah-compliant High Quality Liquidity Assets (HQLA) needed to meet supervisory requirements.

Given possible impacts of such factors, the IMF has stated "For analytical purposes, it is recommended that countries with dual banking systems compile separate aggregate data for Islamic banks, in addition to standard monetary statistics, to allow monitoring of specific indicators for the Islamic banking system such as growth in financing and sources of funding." (IMF. *Ensuring Financial Stability in Countries with Islamic Banking* January 2017.) Advice on compiling different peer groups for conventional and Islamic-based corporations, including deconsolidation of accounts of Islamic windows of conventional corporations, can be added to the chapter.

6. *Financial soundness and macroprudential analysis*

Over the past 2½ decades, the micro and macro perspectives on financial corporations have melded into 'macroprudential analysis' designed to protect the soundness of the financial system. That is, there is realization that the condition of individual banks and the financial sector can affect overall macroeconomic conditions; and vice versa the financial sector is at risk from unfavorable general economic conditions. The work of supervisors of individual financial institutions and the work of central banks on monetary policy, prices, and economic growth now often closely interact.

Part of macroprudential analysis is 'systemic importance', the idea that the condition of large individual financial corporations can imperil entire economies. Systemically important financial institutions (SIFIs) can include banks (SIBs) and insurance companies (SIIs). Moreover, the global economy could be affected – (G-SIFIs, G-SIBs, G-SIIs, etc.). Additional oversight and financial data are seen as necessary for these corporations. Specific statistical measures have been developed by national and international bodies and how general economic conditions are affected is closely watched.

Heightened emphasis on the condition and risks of individual financial corporations is largely divorced from the traditional macro perspective of the SNA. A discussion is needed, perhaps highlighting linking databases with individual data to produce aggregate data that retains analytical information on its elements. Of course, while protecting confidentiality to the highest feasible levels will be a challenging part of that process.[3]

One analytical tool to address this tension is use of 'Concentration and Distribution Measures' (CDM) (Size, Gini indexes, standard distribution, etc.) that can provide standard summary measures of the financial sector without revealing specific identities.

As the financial sector has gained increased importance in recent years, increased supervisory and soundness requirements have grown alongside the traditional macroeconomic statistics needs. The chapter has correctly addressed some of the connections, indeed recognizing that some tasks from both realms will fall on the same compilers and opening the door for enhanced collaboration and linking of datasets and statistical programs. This comment suggests that the door has been opened and that somewhat more can be said in SNA 25.

Specific Comments

¶s 29.04 and 29.26 – 29 The introductory paragraph 29.4 refers to a summary of the impact of technology, and the subsequent section refers to technological innovation affecting financial corporations, which is summarized in a term 'Fintech'. These references seriously understate the extent of innovation due to digitalization and consequential blurring between instruments and the diverse carriers and technical underpinnings of digital messages. Numerous ambiguities and statistical compilation issues beckon greater guidance.

¶ 29.10 on NMEs can mention distributed ledger technology (DLT), the global network of validators and exchanges for bitcoin and other coins. DLT, which is effectively only a decade and half old, facilitates global transacting and validating financial and nonfinancial transactions and can be very porous over national boundaries. As the network can be truly global, identifying the country for statistical attribution can be challenging.

¶ 29.20 on implicit financial services and the reference rate should add a sentence that there is no fully equivalent interest rate in Islamic finance because remuneration on lending is based on noninterest receipts from sales, leasing, etc. that is often shared with depositors. How closely this effectively matches or differs from conventional interest flows was a key topic in the working group on Islamic finance. As the issue was not fully resolved and some new terminology was developed, it deserves to be mentioned in this section.

Section 3. Alternative organizational structures as supplemental statistics can also describe and recommend as relevant accounts for Islamic finance corporations, probably following the frameworks used by the Islamic Financial Services Board.

¶s 29.35 - 36 in the section on nationality-based statistics can add some brief language that the exposures and risks of MNE operations in other countries are different from domestic exposures in numerous ways – business cycles, currency exposure, geopolitical problems, legal differences or uncertainties, etc. Also, transfer pricing and newer tax rules by some jurisdictions on foreign-based income create needs for data on nonresident operations, which is alluded to in 29.36. Bravo for the mention of using cross-reference datasets.

¶ 29.39 lists activities for the central bank sector – CBDCs need to be covered especially because many central banks will be newly involved in retail financial activity. This might include situations where the sectoral lines for handling CBDCs and similar instruments are blurring and might be discussed. Also, centralized payments organizations or centralized securities depositories could be in the central bank, but might also be governmental, or private industry based – some language to clarify is needed.

¶ 29.42 – Add the word 'activities' after the word central.

¶s 29.47 – 49 on deposit-taking corporations can mention situations (securitization, tokenized deposits, defeasance, etc.) where banks might channel funds to auxiliaries, the central bank, or nondeposit-taking financial corporations.

¶s 29.50 – 51 need to discuss Decentralized Finance.

¶ 29.51 Mention micro lending.

¶ 29.61 on financial corporations engaged in securitization of assets is confusing to me. Is the initial focus on special purpose trusts/vehicles critical for the classification? Or is the focus on issuing marketable asset-backed securities and defeasing liabilities (with corresponding assets) off of balance sheets? If the latter, any form of entity created for digital tokenization and securitization might well fall within this classification – which could make this a rapidly growing category with significant assets.

¶ 29.76 can mention Waqf, an Islamic trust. These can have substantial assets and earnings.

¶ 29.77 - 78 Insurance corporations and pension funds – Can mention that some can be systemically important nationally or globally and should add information on their soundness or risk. Also say something about Say something about how pension funds differ from social security

Table 29.1 Supplementary details

In some countries, the table might be subdivided into conventional versus Islamic finance groups, or *of which Islamic finance* lines added as needed.

Possible categories or *of which* lines could be considered for digital assets intermediaries, digital assets exchange and other auxiliaries, and proprietary coin operators under captive financial institutions.

Table 29.2 Supplementary details

Throughout, there might be categories or *of which* lines for digital/crypto.

1. **Link to monetary and financial statistics.**

Consider a new section F. Link to Financial Soundness Indicators and Macroprudential Data. It would include concentration and distribution measures (CDM).

¶ 29.104 Section on money measures[4]

This section can add that money measures will be redefined to include retail CBDCs (China and others to follow). However, similar market functionalities between CBDCs, stablecoins, mobile phone payments, and diverse private digital payments instruments will make definition and compilation of broad money measures difficult and policy development challenging.

Something should be said about cocirculation of currencies (a.k.a currency substitution or dollarization, etc.) which is very important in some economies. The possibility of cocirculating foreign-currency CBDCs is recognized as an issue.

Also, digitalization of financial instruments will affect the velocity of financial transactions with effects on velocity of transactions, distribution of monetary policy actions, and volatility and potential reversal of flows.

¶ 29.109 Can mention Basel supervisory capital rules, including the supplements for different types of risks.

[1] Prepared by Russell Krueger (kruegerstatistics@gmail.com). Some comments related to digital innovations draw on material in *CBDCs: Work in Progress (An Introduction to Central Bank Digital Currencies)* by the author. (2024)

[2] There are numerous examples of less than clearly defined boundaries. Hong Kong enacted a digital 'sandbox' in 2023 that can involve stablecoins as recognized bridges between CBDCs and the real economy. Or a payments coin envisioned in the BIS's Project Tourbillon distinguishes between coins generated by consumers with their banks ('unsigned coins' – as a bank liability) and coins later signed by the central bank ('CBDC coins') that establish the central bank's liability. Also, within this crowded field there can be digitally traded government bonds (including a new World Bank issue) and foreign currency issues. See Krueger (2024) for more examples.

[3] However, the tension between the two perspectives must consider that much supervisory and market data on individual financial corporations are already publicly available. For example, the Basel Pillar 3 capital adequacy disclosure framework for banks already demands disclosure of capital and liquidity data for individual banks, and has additional disclosures for systemically important banks.

[4] Some of the points mentioned here are discussed in Krueger (2024).

Laura Wahrig _Eurostat

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

We very much appreciate the use of sector codes throughout this chapter as it helps the reader understand when an SNA / Institutional sector is meant and when not (see comments regarding 'Banks'). It would be advisable to extent this logic also for transactions and stocks, especially when discussing implicit services. When discussing implicit services (formerly known as FISIM) it is important to be very precise when discussing SNA interest (D.41) or 'bank interest' (D.41g).

A lot of jargon is used that seems not explained (or sometimes not needed). For example: 'Liquidity transformation services', 'Universal bank', 'all-purpose bank'. Sometimes two words are used for the same phenomenon: isn't 'counterparty risk' the same as 'credit default risk'? Also 'Special purpose units', SPE' and 'SPE-type captive' is used without explaining if there is a difference.

Sometimes a judgment is made about (low) risks/safety (see for example on mixed/balanced funds in **paragraph 29.54**) or' attractive rates of return' (**paragraph 29.60**). Such judgments seem particular inappropriate in a system that is based on market valuations.

We take note that the delineation between S.12 and S.13 is not touched upon in this chapter or even referenced to. This delineation is particularly important for bank re-structuring agencies (**paragraph 29.65**), SPE and 'Conduits, intragroup financiers and treasury function' (**paragraph 29.73**). In general, this chapter aligns rigidly activities to sectors. Although activities (as defined in ISIC) can help sometimes, it should not be detrimental, rather for S.12 and S.13 delineation the question who bears the main risks and rewards is most relevant. As such the chapter seems to deviate from ESA practice.

Paragraph 29.1: the first sentence of this chapter reads "*Financial corporations have taken on increased importance over the years, in many economies, reflecting both growth and diversification*". It is not clear what is meant with 'importance' (share in GDP?, but this seems to contradict paragraph 29.11) and can be seen as expressing an opinion, which should be avoided. In fact, the whole paragraph should be better eliminated, as it is unnecessarily verbose and does not contain useful guidance on compiling national accounts.

In **paragraph 29.14**, discusses three types of financial activities while only two are explained. The one asking the most for an explanation, the "other financial service" is missing. Also, a link to ISIC should be made when discussing activities where the three main activities of section L are *Financial service activities, except insurance and pension funding* (64), *Insurance, reinsurance and pension funding, except compulsory social security* (65) and *Activities auxiliary to financial service and insurance activities* (66).

29.14: definition of financial intermediation: this paragraph could usefully take a part of the ESA definition in 2.57, requiring that the financial intermediary "places itself at risk".

Paragraph 29.20 on reference rates for implicit financial services: it could mention that negative production / consumption is to be avoided as this is hard to interpret.

Paragraph 29.23: we read the sentence "*Credit default risk should, in principle, be excluded from implicit financial services on loans and deposits but this is typically not the case. Therefore, any countries that can manage to make this adjustment are encouraged to compile unadjusted supplementary measures for international comparability*" It should be explained that SNA interest, D.41, as well bank interest D.41g, should reflect all types of risks, (e.g. opportunity cost, expected inflation (eroding the return), default, maturity of the asset and view on government or central bank intervention on interest rates).

Paragraph 29.24 It could be reiterated here that interest (D.41) is to be calculated using the debtor approach (i.e., fixed at inception using the market rate at that time) and for whom-to-whom consistency this debtor approach is also used to calculate the flows and stock of the creditor. Also in **paragraph 29.24:** in the distinction between final and intermediate consumption of indirect financial services (formerly known as FISIM), government and NPISH seem missing. Here it might be mentioned that FISIM expenditure of government is considered collective consumption expenditure (P.32, COFOG function group 01.7).

Regarding 'Fintech' discussed in **paragraph 29.26-29.29**: as there seems to be no clear definition of what this entails, an 'off-which' item for Fintech that is uniform across compilers seems very hard to achieve.

Paragraph 29.30: we stumbled over the wording. Maybe "MNE" should be inserted before "part of a domestic ..." for public financial corporations according to paragraph 23.33?

Paragraph 29.31 reads: "*Many national non-financial and financial corporations have large foreign investments in either foreign securities and other financial instruments, and/or hold significant equity investments abroad through majority or wholly owned foreign subsidiaries (outward direct investment positions in the external accounts). Both types of investments expose them to a variety of risks, but the nature of the investment and the risk is different, and more extensive, for direct investment. Where the domestic direct investor has controlling interest in foreign subsidiaries, it is fair to say that the risks are only partly measured in the national financial accounts and balance sheets, and in the external accounts (including the coordinated portfolio investment survey and the foreign direct investment statistics). This identifies an important data gap with respect to financial stability concerns*". First, why are there more extensive risks for direct investment? Second, why are risks of national financial accounts only partly measured? This seems a hard statement to justify when market valuations are used. Actually, in **paragraph 29.35** this sentence "*The foreign subsidiaries are the immediate debtors, but the domestic parent corporation is usually ultimately responsible for this debt (by explicitly or implicitly guaranteeing such debt). In this sense, cross-border connectivity is more complex than the parent's foreign investment claim."* Seems to suggest that the 'data gap' is actually about contingent versus non-contingent liabilities instead of 'nationality-based statistics' versus 'national accounts based statistics'.

In **paragraph 29.33**: I am not sure what "*country credit risk*" entails. A country has many institutional units, some of which have a high credit rating other will have low ratings.

In **paragraph 29.10**, in the sentence "*Similarly, for foreign controlled corporations operating in the national economy, only the domestically consolidated financial statements of the resident subsidiary entities are relevant for the SNA.*", please use 'domestic' instead of 'national'.

Paragraph 29.48 discusses 'banks' in the part on *Deposit-taking corporations except the central bank (S122)*, so a classification in S.122 is expected. However, when reading the paragraph closer, it becomes murkier. For example this sentence makes clear that (parts of) banks are not S.122: "*Some of these banks have evolved over the years, expanding their business line through mergers and acquisitions, and can also offer non-traditional services such as investment funds as well as insurance from non-consolidated units which are typically classified in other institutional (sub)sectors*".

More importantly it should be discussed that the sector delineation between S.12 and general government (S.13) should not depend on the principal activity (ISIC) but rather on who bears the main risks and rewards. To do this it is needed to recognise that for 'banks' the balance sheet (not the income statement) is the most relevant part of the accounts. As an example, defeasance structures that where government bears the main risks and rewards could be mentioned as part of S.13 even though such institutional units can be considered banks according to their activity (ISIC 64).

In **paragraph 29.54** we read: "*Real estate investment funds, which specialize in debt (including mortgages) and equity of companies that purchase real estate. These are sometimes also referred to as real estate investment trusts, but this subsector notably excludes any such similarly termed domestic non-financial corporations set up as trusts, or similar types of funds, which hold real estate as their major asset. In the case of hybrid real estate funds, these would be classified according to the principal activity (i.e., share of value added) and, as such, most of these funds would likely not be included in the financial corporations sector. Mortgage real estate trusts providing mortgage finance or other real estate loans, or purchase mortgage-backed securities, are also included among real estate investment funds.*" It should be recognised that this convention that real estate funds with domestic non-financial assets are S.11 while foreign real estate firms with a foreign non-financial asset portfolio (i.e. recorded as having equity in a notional unit) are S.12 with notional S.11 units in the economies where they are holding real estate leads to some adjustments to be made by compilers of economic blocks. This is similar to the different treatments of foreign direct investments and SPE where in the compilation of a block a foreign entity can become a domestic entity. This more general problem of 'foreign' becoming ‘domestic’ should preferably not only be recognised but also some guidance should be provided.

The part “*these would be classified according to the principal activity (i.e., share of value added) and, as such, most of these funds would likely not be included in the financial corporations sector*” needs some more reflection. Is meant that value added is based on the concepts of production and intermediate consumption, and as foreign real estate is shown as equity stake there is no value added? If this is meant it should be clearly stated as this is a clear argument for looking at risks and rewards instead of value added for the classification of these institutional units (not KAU).

On mixed/balanced funds it is written “*Mixed/balanced funds with a wide variety of investments – stocks, bonds and other investments (including crypto funds and credit funds). Balanced funds offer a combination of safety, income and holding gains.*” It seems not wise to say that these funds are providing safety. Especially crypto has proven to be very volatile.

In **paragraph 29.61** it is claimed that financial corporations engaged in the securitization of assets provide *attractive rates of return* to its investors. This judgment seems inappropriate in a system that is based on market valuations, i.e. where price are set following supply and demand and both the buyer and the seller voluntarily engage in a transaction.

29.74: ***"Captive specialized lending institutions*** provide loans from funds received from a sponsor, such as a government unit or an NPISH. They can be involved in various types of lending such as student loans, farm loans, import/export loans (possibly including some factoring), etc. These entities can include public corporations." Such public captive specialised lending institutions, if they act as an autopilot, according to ESA 2.23, 2.25, 2.27 etc. should be classified in S.13 sector if domestic and its operations are to be reflected in government accounts in enhanced form according to consolidated list of recommendations otherwise. This seems not reflected in the proposed paragraph. and should be changed accordingly.

29.66: The treatment of factoring as a loan liability of the purchaser (of the original good or service) and the discount as a fee is welcomed. However, depending on their main activity, which may be for example taking over the whole billing process for sole proprietors, these companies may not in all cases be appropriately classified as financial corporations.

29.46 It is missing that the deposit liabilities of S.122 units (or close substitutes for deposits) should not only be from monetary financial intermediaries (see ESA 2.75), also borderline to MMF not drawn.

29.64(5) now reads: "*Bank re-structuring agencies that support strategies to liquidate, recapitalize or merge banks as well as the recovery of bank assets, where the main risks and rewards within the entity and not within another entity. This activity usually takes place under situations of bank financial distress*". Such agencies are part of general government (S.13) when the main risks and rewards are for S.13. It should specify that if such entities are classified as S.125, that all government operations should be rerouted to be reflected in government accounts (see wording in ESA 2010 paragraph 20.213). It is not clear what "entity" is meant in the rephrasing? The entity under distress or the entity restructuring? How could the entity that is being restructured be responsible for restructuring itself? And could the entity charged with restructuring qualify as an institutional unit? Controlled by whom? Lastly, "*under situations of bank financial distress*" seems not correct English and is furthermore not clear what is meant.

This part of **paragraph 29.66** is not very informative: "*Firms involved in import/export finance (which can include public corporations).*". It could be mentioned that these firms provide guarantees. And that the government control is because, the government wants to support imports/exports as a public policy (improve trade conditions). If the unit only executes public policy and has no autonomy of decision it may not necessarily be classified in S.12.

In **paragraph 29.73** regarding *'Special purpose units'*, SPE as subset of these units? Or is it synonymous? And is SPE the same as 'SPE-type captive'' (used in **paragraph 29.89**)? These different terms are making the chapter (unnecessarily?) hard to read.

In **paragraph 29.73** seems not correct for the last bullet: "*Conduits, intragroup financiers and treasury functions when these functions are taken on by a separate institutional unit. Conduits (often SPEs) typically refer to entities that raise funds, which could be in the form of debt securities, shares, or partnership interest on open financial markets for other affiliated corporations or for various types of public projects. Often the conduit's liabilities are guaranteed by the parent company or government*." This seems not part of S.127 but S.13, if the entity is considered S.127 then the government operations (and debt) should be rerouted. All in all it is very dangerous here to classify entities simply by how they are called (the form) instead of who bears the risks and reaps the rewards (the economic substance).

In **paragraph 29.71** a third category of 'other financial auxiliary' (S.126) is discussed: "*non-profit institutions that are independent legal entities serving financial institutions. This would include foundations set up by financial corporations.*" It might be explained in what ways such foundations are serving the financial institution(s). It could furthermore be mentioned that when such foundations are engaged in sponsorships, it is considered advertisement (see 2008 SNA A4.16).

In **paragraph 29.85** it reads "*Constant net asset value funds, as the name suggests, aim to maintain a constant value. These are accounted for at amortized cost. This approach values the assets at amortized cost. This amounts to purchase price plus/minus the discount/premium linearly over the life of the asset. However, these funds are subject to potential losses and increases in operating costs.*" As SNA is an accounting system that is distinct from business accounting, if in business accounting (such as IFRS) it is allowed to use accounting tricks to have constant valuation, the SNA should deviate from this practice to reflect the market/economic reality. Now it seems that SNA proposes to deviate from market valuation, which seems a wrong message to convey.

In **paragraph 29.91** some wording issues seem present in the last sentences.

In **paragraph 29.92** the underlined word is (still) missing: "loans that are likely not going to be fully repaid". Also, why is this paragraph placed in chapter 29 and not in chapter 14? It seems not concerned with the sector, but rather the breakdown of loan stock? Last, why are the requested breakdowns considered relevant for "non-bank financial intermediation" specifically as stated in the text?

29.81: "However, as the financial crisis revealed, it can also present a source of risk to financial stability." The paragraph discusses shadow banking and the financial crisis. In particular the last sentence could give rise to the impression that the financial crisis was caused by shadow banking which does not appear to be the general reading. It should be rephrased, and the interest in shadow banking should be otherwise motivated. It seems not the shadow banking itself, but also or mainly regulatory issues with repackaging risks and presenting them in accounting (and statistics)?

29.82: It seems no longer relevant to cite "G20 Data Gaps Initiative (DGI), specifically, recommendation II.5 of DGI-**II**". (bold added.)

29.89: It would be good to state here (and elsewhere) that the classification of trusts (e.g. single-sponsor ones with no autonomy of decision), domestic SPE (to be consolidated), etc. is not in S.127 but consolidated with their controlling unit. Also the rules on reflecting operations of government SPEs in the S.13 accounts may be stated here.

Paragraph 29.101 reads "*For the most part, the SNA and MFS follow the same principles. It can be stated that the basic accounting rules, concept of residence, time of recording (accrual accounting), and the classification of financial assets and liabilities are consistent between the SNA and MFSMCG. Nevertheless, there are some differences, with the main ones briefly discussed below.*" Please add that MFSMCG, like the ESA, uses the debtor approach (see MFSMCG paragraph 5.113), so that presents a difference to the current draft of the 2025 SNA.

In **paragraph 29.109** it could be mentioned that SNA also recognized financial net worth (B.90f), just as MFSMCG.

General comment on section E: It is not clear why this section, dealing with all sectors and relationship to other statistics and manuals, is placed in this chapter, supposed to deal solely with the S.12 sector of the economy.

29.113 "write-offs are treated as volume changes": This is not necessarily the case in ESA.

29.96 Is this paragraph needed? Why does it single out some subsectors and not others?

29.97: it should be stated that some differences in sectorisation can exist.

Chapter 30: General government and the public sector

2 Comments

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Comments below support answers under questions 1-4, a number of comments were previously supplied in the comments on the initial version of the chapter.

In general, it is disappointing that it was not possible to integrate improvements implemented in ESA 2010, the Eurostat manual on government deficit and debt and the GFSM2014 to this chapter. Therefore, a key goal of the SNA update - consistency among international macroeconomic statistics manuals - seems to be missed. Given increased focus on sector accounts, and the need of - at least European users - to have an integrated or at least consistent fiscal and macroeconomic analysis framework, it is regrettable that the 2nd draft of the chapter still does not manage to describe the SNA transactions relevant for general government and continues to use a mixture of GFSM and SNA (old and new) terminology. De facto, very little guidance is provided for compilers of S.13 accounts in SNA framework.

We think the section C should be moved to an Annex as it refer to treatment in other statistical manual (GFSM) not in the SNA, or refocussed on SNA.

Figure 30.2 is not readable and it is therefore not possible to comment it. **Figure 30.1** is not present and therefore it is not possible to comment on it.

30.1 1/ After put in practice, please add "for the presentation of the general government sector". 2/ the external debt guide is likely the least relevant and might be dropped in favour of the public sector debt guide. 3/ In addition to the Manual on Government Deficit and Debt, which provides for an application of ESA, the ESA should be referenced. The ESA provides for the European GFS presentation in chapter 20, providing for a rearranging of the sequence of accounts presentation without losing consistency with the former. (also for **30.125**).

30.5 The paragraph is misleading, a public entity continuously operating at a loss should be part of the general government sector.

30.13: references seem incorrect. Moreover, the discussion on economically significant prices neither follows in the currently referenced paragraphs in chapter 5 nor in chapter 30 in the following paragraphs, please reference 30.26 and following.

30.14b

1/ outlays should be defined, or used as outlays/expenditure similar to paragraph 30.73. Moreover, in **part C, section 4 and paragraph 30.73**, the terminology is now completely confusing. Presumably "expenditure" in the old meaning is meant, not expenditure replacing "uses". This example illustrates perfectly the confusion caused by mixing a description of the GFSM presentation and using a term already in use for general government. This creates such mistakes.

2/ the first bullet corrects the error in relation to public health, thanks for this. A reference to the paragraphs on individual and collective consumption will be helpful here, nonetheless.

3/ expenditure can be financed "by the sale of assets" is still missing.

30.16 Suggestion to introduce the concept of 'core government' as we do in ESA 2010 paragraph 20.08-20.09. This is also needed to break to circular reference that a government unit is defined as being controlled by another government unit (and non-market).

30.20 4th line "or activities" should be added after "transactions" as some of the financial 'activities' as defined in ISIC are not activities in the traditional sense. This is explained in the new NACE manual Introductory Guidelines paragraph 14 copied below:

An activity as defined here may consist of one simple process (for example weaving) but may also cover a whole range of sub processes, each mentioned in different categories of the classification (for example, the manufacturing of a car consists of specific activities such as casting, forging, welding, assembling, painting, etc.). If the production process is organised as an integrated series of elementary activities within the same statistical unit, the whole combination is regarded as one activity. The exemption to this definition of economic activity discussed in the previous paragraphs is the classification of 64.2 "Activities of holding companies" and 64.3 "Activities of trust, funds and similar financial entities" that have none of the above characteristics and are solely present in the classification for assisting attribution of NACE codes to units (not activities) in the business register as prescribed in Council Regulation (EEC) No 2186/93 .

30.25 should not be added. The second sentence is misleading as 30.26 is not the only criterion for classification, it is also needed to check whether the entity is an institutional unit or a non-profit institution.

30.26: This 'long run' profit criterium is crucial to note that the 50% test is only a 'short run' criterium and that in the long run market units are expected to have at least 100% of cost covered. That is why it is suggested to align **30.27**: "in the short run, while making a profit in the long run. Such an analysis should cover a sustained multiyear period in order to avoid undue sector reclassifications.

30.33: Explain that with “return to capital” the net interest (i.e. revenue minus expenditure) is meant. Also comment from Germany in the previous consultation seems in need of addressing?

“*In my view there is a double-counting when “adding a return to capital used in production”, because government output in the 2025 SNA will include a mark-up for non-market output of government. Therefore this mark-up will be included in intermediate consumption as well as GFCF (and hence depreciation). Otherwise the product balance and/or SUT would be in imbalance.* “

This seems also relevant for other chapters (notably 4 and 7).

The confusion illustrates need to T-accounts and tables and including these for consultation.

30.36: the text in green colour should be added for consistency: “c) If the unit is a non-market producer and controlled by government, it is part of the general government and the public sector. A special case should be made for the central bank which is a non-market producer *[nb as SNA 2025 proposes]* and usually controlled by central government, but is not usually part of general government. “

30.41 the list should not be presented as if it was exhaustive. Moreover, some doubts over adding trusts. Later on, no guidance is given on trusts, precisely because they can be analysed in current framework.

30.60 does not offer guidance - why is it included only to refer to the decision tree?

30.64: It should be "net social contributions" or “Social contributions less service charges” (from chapter 21) to be in line with the rest of the SNA as well as to be clear that social insurance scheme service charges (D.61SC) are to be deducted.

30.67: As 'actual sales' is vague, better to include the transaction codes. Unless GFSM items are referred to, which should be avoided without explaining them. In general, the section uses a lot of GFSM terminology without explaining the presentational and conceptual difference to SNA. It can only be understood by referring to the GFSM, but then there is no real purpose to the section. P.12 output for own final use (e.g. due to R&D capitalisation) is missing. Once again it is unclear whether the GFSM presentation or one compatible with SNA is discussed.

30.68. “Property income may or may not be an important source of revenue, but in either case, it relates directly to the same category as in the allocation of primary earned income account except for the interest payable to financial intermediaries that is treated as implicit financial services on loans and deposits which is respectively deducted from, or added to, the interest or similar expenditure or revenue in the national accounts presentation but not in the GFS presentation”. → please consider the drafting changes in green colour.

30.73: Shouldn’t ‘expense’ be defined first? Also as we understand from draft chapter 21 that ‘expenditure’ is now to be used in the sequence of accounts for what we used to call ‘uses’. It follows that the distinction between GFS presentation (i.e. the shortcut) and the full sequence of accounts can no longer be explained by explaining the difference between ‘expenditure’ and ’uses’, that is therefore a didactical loss and causes confusion as mentioned above.

Moreover, the IMF GFSM concept of ‘net investment’ is introduced here to mean “the sum of the gross capital formation and acquisitions less disposals of non-produced non-financial assets.”. This implies that here ‘net’ is used to included consumption of fixed capital (or depreciation is it is proposed to be called), P.51c, i.e. the ‘gross’ part of ‘gross fixed capital formation’ instead of excluding it. This is very difficult to comprehend, because the phrase ‘gross fixed capital formation itself’ is a unnecessary difficult phrase as it is inherently a ‘net’ figure because disposals are deducted. To illustrate the problem: net capital formation (P.51n) deducts P.51c, while net investments doesn’t deduct this. This seems to violate the rules set in chapter 21 section H that net is only to be used to mean the exclusion of depreciation and depletion. Also it seem not in line with GFSM 2014 paragraph 8.4 *“The net investment in a nonfinancial asset is its acquisitions minus disposals minus consumption of fixed capital*”

30.78: last sentence "partially" should be inserted before "consolidated".

30.81: We note this is in 2008 SNA and in line with GFSM 2014 paragraph 3.162.

However in ESA we never consolidate production account/taxes/acquisition of assets see ESA 2010 para 20.157-20.159.

1/ It should be clarified that here the GFSM presentation is considered, not least by using the GFSM terminology, not consistent with macroeconomic framework in presentation and in concept. Furthermore in 2025 SNA paragraph 4.281 it is specifically stated that “*The rule of non-consolidation takes a special form regarding the transaction categories “output” and “intermediate consumption”. These transactions are to be recorded throughout at the level of establishments. This implies specifically that the accounts for institutional sectors and* *for industries should not be consolidated in respect of output delivered between establishments belonging to the same institutional unit*".

2/ The issues of counterparty - affecting balancing item should be mentioned for the production account (basic price / purchaser price and taxes on products) and it should be mentioned that this cannot be done in SNA.

3/ D.45 rent is missing off the list.

4/ 30.81d It does not appear meaningful to speak of consolidation on items that are presented as acquisitions less disposal such as P.51g / P.52 / P.53 / NP.

30.82: "However, taxes on gross payroll and labour force that are not treated as social contributions should be consolidated when they are significant and can be identified." it should really be clarified here that it is the GFSM presentation that it discussed here, as it introduces differences to SNA, and to important indicators such as those measuring labour cost.

30.85: The last sentence should be eliminated as it is inaccurate. The classification used in GFSM for COFOG (7xxx) and expenditure (2xx and 3xx) are not combined and cross-classified in practice and the theoretical table 6A2 GFSM 2014 is very aggregate. Actually, IMF colleagues have presented to UNSC that such a cross-classification was missing. (Please note that a cross-classification has been achieved by European countries since 2007 and that guidance on it is given in the Eurostat COFOG manual.)

30.88: "*Most mandatory payments for permits and licenses authorizing pursuit of an activity or ownership of a good can be considered unrequited, making them a tax rather than a fee for services. Usually, the primary beneficiary of the regulatory schemes that require these payments is society as a whole, not the individual unit making the payment*". 1/ we propose to add 'compulsory and' before unrequited (consistently throughout SNA when discussion taxes). 2/ Throughout SNA this notion of 'society as whole' is used to mean general government (S.13). It is unclear writing especially when no sector codes are used. Taxes are government revenue, so general government (S.13) is the '*primary beneficiary'* (also unclear writing as no secondary beneficiaries are mentioned).

The GN WS.14 seems not completely reflected and the following should be established: Payments for licences that are not part of a regulatory function should always be recorded as taxes, it was not part of the GN and recommendations to change that principle.

30.90: "Notwithstanding, if the licence is legally and practically transferable to a third party, it may still be classified as an asset in the category of contracts, leases and licences." We note this sentence was deleted (now shown with TC, thank you) from 2008 SNA 20.90a. It should be reintroduced as this is a substantial narrowing of AN.22 that doesn't seem to stem from any guidance notes.

30.97:

a) Please replace expense by expenditure.

b) the reference to OECD Revenue Statistics is erroneous and should be removed - Revenue Statistics does in our understanding not follow the SNA and ESA approach on the recording of payable tax credits as expenditure.

30.98: "generally" should be added before "no impact". Please see Eurostat guidance.. E.g. impact for time of recording.

Use of the term "tax burden" should be reconsidered - it seems derogative. Maybe it would be better to use tax revenue instead.

30.100: last sentence is not in line with ESA 2010 and MGDD, a non-exhaustive example of an opportunity missed to align the standards.

30.116: We note that now swap is put after 'conversion' which is an improvement but still not satisfactory as it is not used in the AF.71 sense.

30.129: "In most instances, the guarantor is deemed to make a capital transfer to the original debtor, unless the guarantor acquires an effective claim on the creditor, in which case it leads to the recognition of a financial asset (a liability of the debtor). the liability of the creditor towards the guarantor)." Should it really be "creditor" in this line? If the former creditor has a (new) liability towards the guarantor, it becomes a debtor.

30.130: "*The accrual principle for time of recording requires that the total amount of debt assumed is recorded at the time the guarantee is activated and the debt assumed. Repayments of principal by the guarantor (the new debtor) and interest accruals on the assumed debt are recorded as these flows occur*". This is a circular way of reasoning which is not helpful for compilers: "the debt is assumed when the debt is assumed and the flows occur when they occur".

30.135 We think it should be mentioned that when the government is not acting as a market agent (i.e. providing gifts to a public corporation) it cannot be regarded as an F.5 transaction although the equity value increases. E.g. "when there is a pure market incentive for both parties involved". Also to be consistent with para 30.139b below.

30.136: Please consider using "distributable income" as in ESA.

30.139a: The addition of "over two or more years" was not subject of any guidance note, nor of the consolidated list of recommendations. It is inappropriate to add this in concept as losses can be accumulated in very short span of time and also problematic from a procedural point of view. Please remove this qualification.

30.146c is inconsistent with 30.146a/b and 30.145b and should be adapted accordingly. 30.146c reads: *When a government buys a loan at nominal value when the fair value is much less, no capital transfer for the difference in value is recorded. However, if there is reliable information that some loans are irrecoverable, their value is reduced to zero as an other volume change in the balance sheet of the corporation and a capital transfer should be recorded from government to the corporation for their former nominal value. If there is some possibility that some part of the loan may be recoverable in the future, the loans are reclassified (at their zero value) from the balance sheet of the corporation to that of the government at the time the capital transfer is recorded. If the value of the loans subsequently increases, this is shown as a revaluation item in the government's balance sheet."* As an irrecoverable loan has a fair value of zero it is just an extreme form of a fair value being lower than the nominal value. Therefore it seems inconsistent to not record a capital transfer every time government is purchasing a loan with a fair value below the nominal value. It is also the economic substance to show a gift being provided here. In order to preserve the consistency of the international macroeconomic statistcal manuals, it would be good to align to ESA 2010 20.121 and the relevant chapters in MGDD, 4.7, 4.8.

30.155: this paragraph now reads "*The measurement of output of the central bank is described in paragraphs 7.165-7.169*", i.e. only a reference to other parts of SNA. However, what should be elaborated in chapter 30 as well as chapter 7 is how the non-market production of central banks is consumed as collective service paragraph 1.27/3.105c will be interpreted as P.32 of S.121 implying an innovation, but why not consider that the non-market output produced by S.121 is consumed by S.13 as a convention? This would imply a smaller change to the framework. If P.32 of S.13 a COFOG function need to be attributed. If P.32 of S.12, is there a suggestion for a new functional classification of S.12 expenditure?

30.158: typo "publiche".

30.172: *"This is particularly useful if there are public corporations operating at significant losses."* If 'public corporations' are operating for extended periods of time (3 years) at a loss they should be regarded as non-market producers as clearly they are not charging market prices. Therefore such units are not part of the public corporations but general government (S.13) I.e. this sentence should either be explained or deleted.

30.180 and Table 30.1 (Comparison of SNA and IPSAS): *"For example, a provision for environmental restoration that is recognized as a liability in IPSAS might be disclosed in supplementary tables in the SNA but would not be recognized in the sequence of economic accounts"* As an example this is a bit poorly chosen as environmental restoration are part of the terminal costs that is accounted for in the main framework (see for example 2025 draft SNA paragraph 11.229).

30.181 (and Table 30.1): it could be mentioned that many assets are valued at nominal value in SNA.

- **Celestino Giron_ECB**
    - **30.8** please replace "grants from other governments" with "grants from other governments and international organizations".
    - **30.28** suggest to drop, as this is an invitation to introduce comparability issues.
    - **30.60** reference to 5.108 would be useful.
    - **30.90** reference to paragraphs dealing with leasing would be useful.
    - **30.129** the last sentence is a repetition of the message in 30.128. Suggest to drop it.
    - **30.173** reference to chapter 14 on the valuation of the "unique non-financial assets" would be useful.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

No

- **Karen Kuhn_South Africa RB**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

We could not find a reflection of paragraph 120 of the consolidated list of recommendations in the draft SNA. Please include this. For the price caps, we refer to Eurostat guidance note on the topic. (https://s-circabc.europa.eu/ui/group/ca7c9cc4-b473-4abc-8e95-263dcd57d79d/library/6635a603-0eab-4c63-9cca-7784b424d2fd/details)

120 Moreover, new guidance on the rerouting of transactions through government will be introduced, in line with the guidance developed in the context of government finance statistics.
Possible examples of scenarios where guidance can be given for transactions between two (or more)
non-government actors to be rearranged through the government accounts are the following: (i) where
government replaces a pre-existing scheme involving payments to and from government with a new
scheme under which the payments, which provide a similar economic outcome, are made directly and
not through government; (ii) where government mandates cash payments between economic actors
that would not take place without the government intervention; and (iii) where government instigates

a price cap, or price fix, but has a mechanism to fund the difference between the price cap and the
market price (or another price) – perhaps at a future date.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

No

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Joao Fonseca**

Paragraphs 30.177–30.182 - Suggest deleting these paragraphs to be consistent with the similar section on Links with IFRS (paragraphs 28.58–28.64) and these paragraphs basically repeat the table “Comparison of SNA and IPSAS”. As a consequence of this suggestion, we suggest adding the following sentence at the end of paragraph 30.176: "Table 30.1 summarizes the differences between SNA and IPSAS."

Table 30.1 - In the section of Recognition of liabilities and in the column of SNA, there is a sentence stating that "provisions for environmental restoration are recognized but not in the main framework of economic accounts." We suggest reassessing the consistency of this sentence with the new guidance introduced in 2025 SNA related to terminal costs in paragraphs 11.229–11.230.

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

For consistency with paragraph 30.19, we suggest amending the text in paragraph 30.12 to "General government units include non-market producers controlled directly or indirectly by government…".

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig Eurostat D.1 GFS

Yes

- **Karen Kuhn_South Africa RB**

No

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4 Do you have any other concerns with this chapter?

9 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Paragraph 12: Wording unclear. It seems to suggest that to be in GG conditions of control and economically significant prices must be present, which is wrong. Control must be present but not economically significant prices. Similarly, clarifying that condition of control & economically significant prices must be present to be a PC would be clearer than just specifying one condition.

Paragraph 30.31: in the second sentence there is no need to say not a market producer if ancillary, overly prescriptive, given this is not a binding condition. The point here isn't that the entity is providing ancillary services, but that it's not an institutional unit.

  - **Laura Wahrig _Eurostat**

The paragraph 30.31 should indeed be clear on that the classification should be in general government on the basis of it not being an institutional unit.

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig ESTAT D.1 GFS

Yes

- **Karen Kuhn_South Africa RB**

No

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

30.2930.27: it would be better not to write "this test is generally not applicable" but "this test is generally not discriminanting"

330.31: the last two sentences are not clear.

30.136: It would be useful to clarify the type of asset to which reference is made (even with some examples) and to introduce a specific treatment for asset sales carried out by units within their core business (for example financial units)

- **Lenka Valenta_Germany FSO**

General comment - To depict public sector is not a priority for Germany. The implementation would be very resource intensive. In addition, to distinguish with and without consolidation is not implementable in practice as the public accounts are not granular enough for instance to draw all the flows between the different types of public units. Moreover, administrative data are not suited for this purpose as in budgetary law there is quite a flexibility within the resource categories.

Chapter 31: Non-profit institutions

1 Comment

- **Nourah Aljehani Saudi Arabia General authority for statstics**

More exploration should be added for Islamic countries and how to treat data of those sorts.

---

1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Rosie Maslin_UK Government Response**

The UK recommend that this chapter is joined with the thematic accounts chapter. It seems to not merit a standalone chapter.

- **Karen Kuhn_South Africa RB**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

5 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

5 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

4 Do you have any other concerns with this chapter?

4 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

Chapter 32: Households

1 Comment

- **Celestino Giron_ECB**

32.8 a note that some income transfers, and particularly taxation, are made at household level, and not an individual level as stated in the paragraph.

32.8 d, 32. 24 3.26 and others please also mention wealth surveys (together with income and consumption surveys).

32.93 last sentence; please indicate that the simplification of considering institutional households as a single individual will always result in errors/ distortions (not only "may distort").

32.95

first sentence; drafting suggestion: "While approaches for estimating and applying equivalence scales for income and consumption are well developed, for wealth there is less consensus whether to use equivalence scales and what the appropriate scale would be (see also para 32.112)".

last sentence; drafting suggestion: "However, since wealth is a stock and not a flow measure, for specific purposes, it may be relevant to show results on the distribution of wealth on the basis of alternative equivalence scales, including the option to present distributional results by household size and composition without rescaling."

32.103 If step 1. implies to remove all institutional households from the analysis without grossing-up the results to the entire household sector in a later step, the link between distributional accounts and macro results for the household sector is lost (as institutional households are not separated in aggregate national account results). This major caveat of the method and deviation from the objectives mentioned in para 32.91 should be spelled out.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

YES

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes: The UK is satisfied with this chapter. Sections on distributional accounts for households are very clear and in line with expectations. The UK is pleased to see reference to Handbook of Distributional National Accounts (OECD, 2023). This cross-referencing to specific guidance is a step the UK have encouraged in other chapters.

- **Karen Kuhn_South Africa RB**

Yes

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

5 Comments

- **Mark de Haan Netherlands**

32.92 states '*As a consequence, they behave differently and the data about their income, consumption and wealth is not readily comparable with those of private households*.' However distributional national accounts are constructed because not every household behaves the same, so this should be a reason to include them, more than a reason to exclude them. Also rephrase the part that data on income and wealth <u>is</u> not readily available, to <u>might not be</u> readily available, in the Netherlands we do have this information. And lastly please explain why modelling and assumptions are valid, and in case of the very rich recommended, approaches to create distributional accounts, but not on this matter?

32.93 This is phrased to one sided, there are possible consequences when these households are included, but then also state the possible consequences when these household are excluded, i.e. income inequality is likely to be underestimated.

32.99 Please add here that inequality is not only relevant when focusing on top income and top wealth, but that the bottom of the distribution is just as relevant, and depending on the specific user demands mentioned in 32.98 perhaps even more interesting.

32.103 #2 remove ".. for each household subsector/group", because this step is ideally done on the level of the individual household. Grouping into subsectors in only done in step 4.

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

NO

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Jorrit Zwijnenburg_OECD**

32.14: As explained in more detail in our comment to 5.4, we suggest to replace 'individual household' with 'private household', in line with the terminology suggested in WS.2 and as used in social statistics.

32.81: It is stated that "By treating pension schemes as social insurance schemes, pension benefits are shown as current transfers, and thus income, rather than as a run-down of saving." This doesn't really reflect the role of the adjustment for change in pension entitlements. It may be relevant to also refer to that in this sentence.

32.102: The Handbook was published in 2024.

32.106: Reference is made to items specific to the national accounts for which imputations may be needed. Whereas currency and pension entitlements may indeed also require imputations, but this is not due to the fact that they are specific to the national accounts, but just difficult to capture in a survey. This may require a slight rephrasing.

- **Lenka Valenta_Germany FSO**

D. Household as producers - Household electricity production should be mentioned here, as well as user-generated content on digital platforms produced by households fulfilling the criteria of assets (IPPs) to clarify the treatment.

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4 Do you have any other concerns with this chapter?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Relation with households and formal sector should be also mentioned. Because unincorporated households sector if registered can be considered as formal.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Para 32.64. It is unclear whether this is referring to the unpaid household work thematic account or suggesting an extension of the production boundary in the sequence of economic accounts. Drafting needs clarifying.

Para 32.102 - Whilst the reference to the OECD guidance is helpful, it would be good if the National Time Transfer Accounts could also be accommodated.

- **Karen Kuhn_South Africa RB**

No

- **Jorrit Zwijnenburg_OECD**

32.84: It may be useful to draw attention to the supplementary pension table that comes close to what is being proposed here. Furthermore, reference could be made to a possible table on household retirement resources.

32.85: Information on consumer durables would also be very relevant for a thematic account on unpaid household services.

32.108: Reference is made to measuring changes in real adjusted disposable income per household, but it may be better to refer to changes in real disposable income. In that regard, it is difficult to properly assign a price level to STiK (as it is provided for free) and to properly take it into account in deriving deflators per household group. As Schreyer et. al (2024) pointed out, it may be better to reflect STiK as environmental variables in which case the deflator should be applied to disposable income and not to adjusted disposable income.

Chapter 33: Transactions and positions between residents and non-residents

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Para 33.45: "In this respect, it can be noted that payments related to the sales of financial or non-financial assets other than those incremented by current or past profit are treated as a withdrawal of equity." The addition in red is needed to align to recommendations. Without the addition, if a company makes a profit of 100 and distributes the dividend by selling 100 of bonds, it would be a withdrawal of equity and not a normal dividend. Or if it sells bonds built up from past profit, this would also be a withdrawal of equity. This is contrary to what has been decided.

- **Jorrit Zwijnenburg_OECD**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Mark de Haan Netherlands**

Paragraph 33.12: Now that we have a combined process for the updating of SNA and BPM, why does this paragraph speak of who takes the lead?

Paragraph 33.13 states that the balance of payments has only a double-entry system. If I understand BPM6 paragraph 3.29 correctly, the balance of payments has also a quadruple-entry system.

Section B: why is there a section on differences in valuation with the BPM? Isn't there a complete alignment? If you want to keep this section, please start by explicitly stating that SNA and BPM completely align.

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Previous references to SPEs in SNA 2008 26.28 and 26.41 have been deleted, leaving no references to SPEs at all in this chapter. As SPEs are specifically established in the RoW, it seems relevant to mention them in this chapter, with the reader pointed towards Chapter 5 for more information.

- **Jorrit Zwijnenburg_OECD**

33.24: Please add a reference to paragraphs 32.26-32.32 and Chapter 23 and perhaps cut the reference to merchanting, as other global production arrangements may be more relevant these days.

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

7 Comments

- **Warinee Wonk-urai Thailand Bank of Thailand Senior Analyst**

Accounting principles: Time of recording and change of ownership

Paragraph 33.18

The reference paragraph in the part of accounting principles: Time of recording and change of ownership is wrong number. Paragraph number 10.53 and 10.55 should be replaced with 11.61 and 11.63 respectively.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

Some of the terms used are not consistent with the terminology found in chapter 21. For instance, “international accounts” are referred to as “external accounts” in chapter 21 of the 2025 SNA as well as in the BPM7.

There are also references made that have not been updated, for instance in paragraphs 33.18, 33.20, 33.26, 33.43, 33.45 and 33.78 as well as the table on “Overview of the balance of payments”.

In addition, we would like to highlight **possible typos** in the following paragraphs:
• Paragraph 33.21 - ...The income accounts in BPM7 **just show** the income transactions from the point of view of one party.
• Paragraph 33.22 - ...The **use made of products** is entirely domestic in nature.
• Paragraph 33.36 - There should be **17 instead of 16** standard components of services.

- **Rosie Maslin_UK Government Response**

33.433.5 does not seem to read correctly for the new phrase of transfers.

33.4 is difficult to interpret. The following thoughts from reading might help considerations if revising wording: There’s inconsistency in the two yellow-highlighted words. For the green-highlighted word, this might be clearer if flow of ‘what’ is clarified (I believe it’s of goods/services, rather than money). Given that the rest of world account is drawn up from the perspective of the rest of the world, I would expect that imports (from the row) would be revenues ‘to’ or ‘for’ the row.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

- **Jorrit Zwijnenburg_OECD**

33.36: There are 17 instead of 16 standard services items in BPM7.

---

4 Do you have any other concerns with this chapter?

4 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Jorrit Zwijnenburg_OECD**

33.26: Please update the reference to the latest published IMTS (2010).

Chapter 34: Measuring well-being

4 Comments

- **Eli Fenichel_US Yale Univ**

Need to clarify the connection of wellbeing to the economic concept of welfare.

The distributional discussions are good.

Fig 34.1 – The title is called Aspects of well-being, but some of the things listed are summary statistics that relate to wellbeing, e.g., NNI. We should keep ideas straight from measurement proxies. Also the middle circle is confusing. These are things that would say are in the SNA, but often obliquely. Or at least the shadow of the things labeled outside the SNA are there. I don't think these should referenced as outside the SNA. Rather, these are things that confound within the SNA. Finally, crime and law enforcement are very much in the SNA.

34.10 – I think more clarification is need here. The issue is that measures of production can map to changes in welfare, but it matters where the boundaries are drawn and how things like netting are handled. It also requires some modest assumptions about preferences and how big changes actually are. Therefore, in theory there can be close links, but in practice things often breakdown. This is one reason why it is important that extended and thematic accounts can clearly and smoothly interact with SNA production-boundary driven accounts.

34.28 – I understand why it says the effects of price changes need to be removed. I'm concerned the language could be confused as price changes should be ignored, but it is just the opposite. It might be helpful to say this helps connect to Hicksian notions of income and economic welfare.

34.34 – Also, need to include the change in the NPV of commonly held assets for which the household is part of the common. This is the case for many natural resources. Households can be the economic owner of a share.

34.62 – this is an important point. There must be a way to integrate unpaid household work with other forms of income. This is important for macroeconomic policy related to childcare and education. The challenge is that households may substitute unpaid work for paid work to provide services. Not accounting for the unpaid work can give the wrong singles of average income growth. For example, if a parent can earn a wage of $100, but must spend $120 on childcare, then policies that encourage work are net loss. For example, measuring unpaid household work related to childcare might be relevant to child related tax policy, not just measures of wellbeing.

34.70 – It might be worth pointing out that consumption of these consumer durables is increasingly tied to proposals for "living standards measures." The challenge is purchase of a washing machine does not mean the machine is used. Air conditioning is an example likely to becoming increasingly important.

34.73 – this should be some ecosystem services are outside the production boundary. However, many are intermediate goods within the production boundary. Many of the services listed here are either in the SNA or depend on natural resources within the SNA. For example, outdoor leisure depends on many natural resources, where these do yield transactions. Moreover, things like flood control services are implicitly prices into structures and insurance contracts. This puts the asset on the balance sheet, even if the service in intermediate. Care should be taken not to dismiss these services as not part of the SNA, but rather how some may already be counted. The challenge with these services is we do a bad job measuring levels, but a better job measuring changes.

34.75 – I don't think this is 100% correct or at the very least is very confusing. There is no example of a non-use value provided. The methods provided can be used for use values, but often ask different questions then what the SNA is trying to measure. They often ask about willingness to pay for large discrete change, rather then marginal value. On the other hand, non-use may be catch all term for way someone is willing to make a donation to a conservation NGO, that transaction is recorded (and we don't need to label it). The bigger problem is the "taxonomy" of things people care about for benefit cost analysis is not fully aligned with the taxonomies used in national accounting. The term non-use seems to fall into this category. Another example of non-use may actually be military spending if the goal is not to go to war. Indeed, the term non-use simply reflects a case when people give something else up and it is unclear to the analyst why. It is not our job to judge. Of course, the challenge is that including results reported as non-use value could lead to double counting.

34.92 – time-use data should be increased coupled with more detailed location data.

34.93 – the focus on exchange value here is confusing. When we measure marginal values on non-market production, we often measure prices and quantities. These can be used to construct exchange values, but this is different than decomposing exchange values into prices and quantities. This is important because the welfare economics and national accounting price concepts are the same if the accounting boundaries use broad taxonomies for goods and services, which is often the case for beyond production boundary household production.

Section E – this is growing international debate about the value of a statistical life. I'm not sure if this should be mentioned here. That is largely a regulatory concept.

Fig 34.2 – to the extent the gray boxes also help develop human capital there might need to be arrows creates directed cyclical directed graph. Such a directed cyclical graph could be used to explain why measuring human capital is so hard.

Health care activity – this should be linked to the concept of defensive expenditure.

- **Tatsuya Sekiguchi_Japan NA**

Paragragh 34.125

Does Long Term Care (Social) refer to care (nursing) services that support housing and activities of daily living for those who need care and nursing, such as the sick and elderly in order for them to live at home?

Or do you mean safety net care services for those who do not need nursing care but have difficulties in living due to unemployment, poverty, etc.?

We would appreciate a clear explanation and description of the definition.

- **Noemi Frisch _Israel ICBS**

34.71 "While this activity is outside the SNA..." this last part of the paragraph could be omitted.

- **UNSD Ilaria Di Matteo**

Comments from the SEEA Central Framework Technical Committee of the UNCEEA

Please see comments in the main wiki page of the

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

No

- **Karen Kuhn_South Africa RB**

Yes

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

Several of the changes and additions in this chapter are very much appreciated. Some room for improvement remains, though.

- **Jorrit Zwijnenburg_OECD**

Yes

---

2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The chapter gives a mixed impression as to whether the SNA produces measures of material well-being or whether it does not. Certain parts claim explicitly that it does not (e.g. para 34.10) but then others indicate that it does produce measures of material well-being (e.g. para 34.11). One method of reconciling these is that the SNA makes no claim that GDP is a measure of material well-being, but that other measures in the SNA (such as consumption and income) are measures of material well-being. If this is not the intended message it should be clarified. If it is the intended message, we would not agree.

The deletion of the material on human capital (Para 34.95-34.109) appears to be because it is now included in chapter 35. This appears appropriate but should still be referenced under the wider framework considering what constitutes wellbeing and sustainability.

There is a tension between the development of tables which primarily speak to the national accounts and those that primarily speak to well-being. National accounts data are primarily developed for macro-economic policy purposes, including the use of capital (physical, intellectual, natural and human capital), while more social focused well-being statistics are primarily developed for other policy purposes. The chapter does not bring out this distinction: tables 34.2 and 3 disaggregate national accounts data, while 34.4-34.9 are more well-being oriented but include a human capital table that is not consistent with the national accounts framework.

- **Karen Kuhn_South Africa RB**

Yes

- **Poonna Pipatpanukul Thailand Bank of Thailand**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

yes

- **Jorrit Zwijnenburg_OECD**

34.21: Not sure why ‘economy-wide’ has been replaced with ‘aggregate’. I would prefer the former as it better specifies what is meant here, whereas ‘aggregate’ is a too generic term here, leaving readers wondering what it may refer to. Alternatively, ‘total economy’ can be used?

---

3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

9 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

No

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

34.2: "the goods and services consumed by people that are outside the scope of of the SNA production boundary". Use of "consumed" is misleading. People benefit from, use, enyoj... even the words "goods and services" are doubtful... in 34.15 in particular the discussion from the consumption perspective includes ecosystem services (section D). Households are thus charcterised as "consumers" also when they benefit from, use or enjoy (directly) ecosystem services. If there is a consumer, there must be a producer. It is implied, like in chapter 8 of the SEEA EA (which was rejected when proposed as as international standard) that ecosystems are producers. This turns upside down the concept of economic unit, the third party principle and other logical constraints. The same logic applied to non-productive activities undertaken by individuals should be applied to ecosystem services: "it is not possible for one person to do employ another person to perform the activity **in place of ecosystems**" (34.72, with the adaptation in bold). An imprecise framing is not necessary for discussing the accounting perspective on ecosystems and their useful functions.

34.15 In this framing, it is incorrect to exclude ecosystem services from the production perspective, they would be produced and ecosystems would be their producers. But by definition ecosystem services are flows between ecosystems and humans, they do not have an exchange value and not even a welfare value measurable in exchange value (i.e. monetary) terms. This implies that they are directly measurable only in non-monetary terms. What can be measured in monetary terms in relation to them is actual or hypothetical SNA assets, goods, services, activities whose existence depends upon ecosystem services or that otherwise are connected to them.

34.73 "The monetary value of these services" (used by people individuallly or collectively) does not exist and is not univocally measurable, unless by purely conventional imputation, as ch. 9 of the SEEA EA demonstrates. It is not embodied in goods and services purchased by households, rather ecosystem services are - along with the purchased goods and services - an indispensable input for the generation of outcomes that are directly related to well-being. As such, their value is inherently non-monetary and is (just as the outcomes) fully beyond the grasp of acounting and valuation.

34.75 Measuring non-use values in monetary terms, as the mentioned methods do, is an inherent logical contradiction. Non-use implies non-transferability, i.e. no exchange could ever take place. The fact that the methods mentioned make up a price for it does not justify using it in official statistics.

34.76 It should be clarified that the structure does not have a total row because at least some entries cannot be expressed in the same measurement unit (including monetary terms). The total column is also doubtful as long as e.g. different household types use different bundles of e.g. ecosystem services; it should be stressed that the table is a structure and all items in the rows should be homogeneous. Otherwise, delete the total column.

- **Jorrit Zwijnenburg_OECD**

34.4: The second column not only concerns extended accounting, focusing on data from outside the sequence of economic accounts, but also encompasses thematic accounts providing more insights into specific elements (largely) captured within the production and asset boundary, such as health care and education.

- **Lenka Valenta_Germany FSO**

Figure 34.1 Aspects of well-being - where are in this figure included “household distributional accounts (accounts for the distribution of household income, consumption and wealth)”? Please clarify. See also our comments on Ch3 and Ch21.

- **Marshall Reinsdorf_ISWGNA Editorial Team**

34.56 refers to FISIM, but this term has been replaced in the earlier chapters.

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4 Do you have any other concerns with this chapter?

10 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes. In Figure 34.1, it is suggested that “accounts outside the sequence of economic accounts in the SNA” be grouped into “social and population statistics” and “environmental and economic accounting.”

Paragraph 34.89. What does "a parallel method of physical time accounting as a better comprehensive solution to measure household experience" refer to?

Paragraph 34.98. It is suggested to expand the information regarding the appropriate method for incorporating data on unpaid domestic care work for adults into the extended accounts of education, training, and healthcare.

Paragraph 34.104. The method or tool that would be used to obtain information on unpaid domestic services work for industries and the detailed industrial breakdown is unclear. It is recommended to provide more information.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Hong Dang _Vietnam General Statistics Office**

The measurement of wellbeing through object measures (income, consumption) is quite appropriate but it is possible to clarify how these indicators interact with subject measures (happiness, satisfaction) to more clearly reflect the result of wellbeing measures

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Para 34.2: This breakdown of the 4 aspects most relevant to measuring well-being is strange and the UK would not support it. At first it seems like a mutually exclusive list of different areas the SNA covers relevant to well-being. But then it also covers Sen-styled functionings and capabilities, which the SNA does not really help with. This does not appear helpful as a breakdown. This appears in Chapter 2 as well.

Para 34.3: This paragraph then indicates that Figure 34.1 will show how these different aspects relate – but Figure 34.1 has a different breakdown. The breakdown in Figure 34.1 seems more in line with the research literature and makes more sense.

Figure 34.1: It's not clear whether the circular diagram is still intended to be published alongside the table-based diagram. The table-based diagram is an improvement and negates the need for the circular diagram.

Table 34.5: Types of unpaid household service work – area 'Information services for own household or Family' uses the description

'With the expansion of the internet, there is now more scope than before for households to produce information **for other households** through digital platforms. These services do not have to be used by the consuming household to then produce another form of unpaid household production but could also be used as part of household leisure activities. The key criteria which defines whether the information produced is of value is whether the consumers of the information could have used a paid service for similar information.'

The UK suggests rewording the description, so it allows the focus to be on your own consumption. However, excluding other households will mean the value of information services may be extremely small. It is likely the category should be there for completeness.

Therefore, the UK suggests replacing it with: 'With the expansion of the internet, there is now more scope than before for households to produce information **for their own use, or for the use of others,** through digital platforms. These services do not have to be used by the consuming household to then produce another form of unpaid household production but could also be used as part of household leisure activities. The key criteria which define whether the information produced is of value is whether the consumers of the information could have used a paid service for similar information.'

Para 34.28: Purchasing Power Parities provide a means for producing comparable data around the consumption-side of the economy, which is suitable for a wellbeing measure, but there should be a note that PPPs are less suitable for demand-side analysis.

Para 34.104: It would be useful to know the SIC codes which correspond to these industries.

As with chapter 32, sections on distributional accounts for households are very clear and in line with expectations. Very pleased to see reference to *Handbook of Distributional National Accounts (OECD, 2023)*.

A possible improvement would be to merge the distributional elements with those in chapter 32 as there appears to be duplication of the discussion across the chapters.

- **Karen Kuhn_South Africa RB**

No

- **Poonna Pipatpanukul Thailand Bank of Thailand**

More concrete examples of well-being analysis could be useful. For example, provide numerical example in the Table 34.3 as well as show how to interpret the data of well-being indicators and compare it across household types.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

On Table 34.2:
- Information by income decile on the aggregates in the production account seems very difficult to estimate and does not seem to add much relevant information on household wellbeing.
- For what concerns the capital account, it would be preferable to consider only gross fixed capital formation and its depreciation, due to the difficulties of estimating the distribution

of inventories.
- Finally, also the list of balance sheet items could be simplified, considering only real worth as a unique aggregate, besides the components of net financial worth.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

34.4 is a fuzzy, where it used "...often...". Moreover: the measurement of well-being concerns people. Therefore, "ecosystem services" among the data from outside the SNA that concern "aspects of well-being" means ecosystem services used by households. What would the "**direct** connections to data within the sequence of economic accounts" be?

- **Jorrit Zwijnenburg_OECD**

34.57: Recording of data on consumer durables is also relevant for the measurement of unpaid household services.

Chapter 35: Measuring the sustainability of well-being

4 Comments

- **Eli Fenichel_US Yale Univ**

35.1 – the reason current and future wellbeing is need for sustainability, is sustainability is about changes over time and not levels. It would be nice for that point to be made clearly.

35.4 – It is not clear that social capital can have the metric properties of the other classes of capital. Social capital is really about institutions and should be treated separately. Furthermore, human capital and natural capital are forms of economic capital, so the term economic capital is confusing. It is more than financial capital. It seems to be the union of what are defined as produced and non-produced capital earlier in this revision and also perhaps financial capital. There is a question as to whether financial capital is actually separate from produced, human, and natural capital since financial capital is actually usually set of contracts the at clarify the future flows from real capital (e.g., equity and debt instruments). So, it is not clear if including real and financial capital together leads to double counting. Of course, there are not financial capital instruments for all real capital, so it is not sufficient to only measure financial capital.

Fig 35.1 is very helpful. It might help to use this figure earlier in the SNA and use it to resolve the terms produced natural capital and non-produced natural capital. Also, in Produced assets should be excluding biological resource or natural capital generally? Likewise, for non-produced assets. Finally, again I don't like the term economic capital implying that natural capital is somehow non-economic. This will create a large issue for NSO that tasked with only focusing on economic concerns. Built capital is an alternative or designed capital? It might also be worth pointing out that no SEEA exists for human or social capital yet.

35.14 – It is also reasonable to ask if artistic originals or other intellectual property are human capital?

35.19 – this definition seems to rule out non-produced capital. Again, I think produced capital was just a good term. No need to muddy the waters calling it economic capital and implying natural capital (and human capital) are not economic. I concerned that if they are not economic capital, then they may be outside the preview of some NSOs. Other thought, it might be wise to discuss natural capital first, then produced capital could be describe as all the things meeting the definition that not included as natural capital. I say this because then we avoid language of excluding natural capital.

35.20 – agree, but I don't think this one section is enough to avoid people acting in bad faith to ignore natural capital.

35.24 -- … of which the latter are not recognized… should be of which the latter may not be recognized. The reason this is important is that there are some boundary cases that are important generate confusion. For example, wetlands that clearly capitalize into home value for storm protection or insurance premiums could be treated as natural capital and part of the land account. The key is meaningful management of the wetlands for this purpose and the ability reasonable trace out the fiscal impact, for example see

Taylor, Charles A., and Hannah Druckenmiller. "Wetlands, flooding, and the clean water act." American Economic Review 112, no. 4 (2022): 1334-1363.

35.25 – I have commented multiple times on "Environmental assets over which ownership rights have not, or cannot, be enforced, such as open seas or air, are excluded." I believe the examples are misleading. A local government can act as the legal owner and economic owner of local air quality. Perhaps changing air to global climate would be more appropriate. Moreover, there are case where open seas are allocated via international treaty. Basically, in most countries such pure open access resources are very rare, and that should said clearly. It is incumbent on NSOs to understand the institutional arrangements.

35.26 – Again the examples here generate confusion. Forests are clearly a nature resource often. I have already given a case when wetlands would appear in the land account. Urban areas are most certainly land, structures an more, even coral reefs that local governments and firms can take insurance on and directly contribute to local production are natural resources an within the asset boundary. Bullet 35.26 seems to rule this out, which is not correct. It is hard to characterize ecosystem assets as anything but residual natural systems that do not meet the criteria for inclusion within the SNA as natural resources.

35.27 – this should come earlier before 35.24.

35.28 – This is a very simple case. There are other cases, for example when a water management authority uses a forest as part of the water treatment process, then the forest is a natural resource within scope of the SNA. However, it might show up as land rather then forest. This land v forest partitioning is something that countries should be able to determine for themselves so long as they avoid double counting. Such a point should be made clear. (somewhat addressed 35.29 and 35.30).

35.29 – again some of these examples, under some institutional contexts, put what is an ecosystem asset in some context within the bounds as a natural resources in other contexts. This is an important that should be made more clearly.

35.32 -term environmental assets introduced and not defined.

35.35 This is very good, could cite

Fenichel, Eli P, Monica F Dean, and Oswald J Schmitz. 2024. "The path to scientifically sound biodiversity valuation in the context of the Global Biodiversity Framework." *Proceedings of the National Academy of Sciences* no. 121 (34):e2319077121.

35.42 – it is a bit confusing to lump land and ecosystems, with land being within the SNA asset boundary and ecosystems supposedly excluded.

35.49 – this is inconsistent with really definition. This may define strong sustainability, but one could also argue that the value of the resource must decline or the value of the class of resources must not decline for sustainability.

35.95 – Yes there are challenges with the monetary valuation of ecosystem services, and there is also a lot of knowledge about how to do it. In many ways it not much harder than owner occupied housing, artistic originals, or other tricky things within the SNA already. It is certainly easier in many cases then accurately measuring the marginal value of insurance products.

The section starting at 35.97 could be cut without much loss. I think is repetitive or gives voice to concepts that have emerge but use the term “value” in a sense that does not align with economic thinking. The focus should be on NPV. The PMI emerges when you assume a perfect market, including perfect insurance and lending markets. Finally, the bits about non-use value are better covered earlier, though I put some comments on that as well.

35.106 – this is great. Might relate critical natural capital to Stone-Geary utility/ production. That might be helpful for economists.

35.116 – ideally risk is reflect in prices.

35.118 – add “national budgets” to the first sentence too. It is not just micro-prudential risk that is important.

Section 7 – Supporting the measurement of sustainable finance needs and beyond needs work. First, I think this is a topic that could sink the whole SNA especially framed this way. Second, workable sustainable finance is just finance. This could be reformed as supporting thicker and more robust markets for a broader set of risk management challenges. However, even that might go beyond the immediate goals of the SNA?

- **Simon Schuerz**

Comments by the Environmental-Economic Accounts Sections at the Federal Statistical Office of Germany:

Chapter 35:

General: The title does not match to the content. The chapter describes how to measure different capitals, not how to measure sustainability.

35.9: The paragraph refers to the definition of economic assets in Chapter 11. It should be mentioned here that not all natural capital assets satisfy this definition. Renewable energy assets are not a store of value that can be carry forward value from one accounting period to another.

35.24: The first sentence should be amended to: “Natural capital refers to the sum of natural resources and ecosystem assets (after correcting for any double counting from the overlap of these assets), of which the latter are not recognized as assets in the sequence of economic accounts.” Otherwise the statement would be misleading.

35.42: The first broad accounting theme of the SEEA (i) should be “accounting for environmental assets” rather than “accounting for natural resources”. The former has a broader scope, which is an added value of SEEA.

35:48: The title above (35.C.1) should be “Accounting for Environmental Assets”

35.51: The statement that SEEA provides a richer and more comprehensive discussion does not follow from the text and an explanation of differences and added value of SEEA would be beneficial here.

35.58 – 35.59: In this chapter on sustainability the essential role of ecosystem extent and condition accounts should be worked out more clearly. No analysis of sustainability can be done with asset values of natural resources and ecosystem assets alone. Alternatively, this could be discussed in Section F.

- **Noemi Frisch _Israel ICBS**

35. 20 As mentioned above in comments to chapters 2 and 3, and also explained a bit here, the use of "economic" may be confusing. Is it needed?

- **UNSD Ilaria Di Matteo**

Comments from the SEEA Central Framework Technical Committee of the UNCEEA

Please see comments in the main wiki page of the

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The Chapter doesn't seem substantially changed since last time. There are some minor changes and clarifications, which seem like
improvements, but our position has substantially changed relative to the draft chapter, and as with comments to other chapters, suffers from lack of ambition in recommending measures to showcase the priorities of this topic.

- **Karen Kuhn_South Africa RB**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

The adoption of a capital approach with reference to environmental accounting themes (i.e. the introduction of the notion of natural capital and the misleading attribution of this notion to the SEEA) was not debated enough in the revision process. According to us, the recommendations reflected in the chapter are not "agreed" in a general sense. At least in the Environmental-Economic Issues Area Group under the Wellbeing and Sustainability Task Team (not a secundary group, as for the sustainability topic), there was no specific discussion on this. The London Group on environmental accounting has not been consulted either.
Also, the monetary value of ecosystem services and assets is discussed without any problematisation, even if it is not part of the inetrnational statistical standard.

- **Jorrit Zwijnenburg_OECD**

Yes, except for one issue in 35.122. It concerns the sentence "For ESG equities, the scope concerns those investments in institutional units in which 50% or more…". The SNA update issues note Sustainable Finance in the 2025 SNA and BPM7 (paragraph 30) notes that the AEG-BOPCOM meeting in February 2024 recommended that the 2025 SNA and BPM7 include "wording to the effect that if the DGI-3 Rec 4 task team develops a better approach than the 50% threshold principle for equity (for example reflecting new market standards), this should be adopted by the SNA and BOP/IIP". Could you kindly reflect this wording in paragraph 35.122? The SNA and BOPCOM Secretariats and Project Managers are aware of this proposal, and have confirmed that they could issue interim guidance if the wording of the SNA envisages this and if the DGI-3 Rec 4 task team recommends any changes. The BOPCOM Secretariat has specified that it will follow the SNA wording on this point.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

8 Comments

- **Johannes Kleibl EU ECB Lead Data Scientist**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

35.44 states "that measures in monetary terms can be grounded in an appropriate biophysical reality". This requires explanation and may be disputable.

- **Amanda Driver_SA_Biodiversity Consultant**

Figure 35.1 Component of four capitals.

This is a useful figure. However, it’s not clear why cultivated biological resources are excluded from economic capital and included in natural capital.

There is no discussion in this section of why all biological resources, including cultivated biological resources, are seen as natural capital, which is inconsistent with the definition in 35.25 that natural resources are "naturally occurring" (and also with the definition of environmental assets as naturally occurring in 35.24).

In Chapter 4, 4.115 says "In view of arriving at an improved accounting for the role of the environment in economic developments, natural capital is separately identified, grouping together both produced and non-produced natural resources."

Is this the rationale for including cultivated biological resources in natural capital? If so, as noted in my comments on Chapter 4, this seems like quite thin.

35.19 First bullet says that biological resources are excluded from produced assets. It's not clear why the word "cultivated" has been deleted here. Also, as I've noted, the rationale for this doesn't seem to be explained.

- **Lenka Valenta_Germany FSO**

35.50 As regards the "same structure" of assets accounts in the SNA and the SEEA (in monetary terms) – (among other) the changes between the opening and closing balance sheets in the SNA are presented a bit differently (and in a more aggregated way) then in the SEEA. In the SNA the changes are presented (explained) through transactions (including among other regeneration, depletion and depreciation of relevant natural resources), other changes in volume of assets (discoveries, reappraisals, catastrophic losses and reclassifications) and revaluations. The SEEA presentation of data, as shown in Table 35.1, is on a gross basis (shows additions + reductions). This should be made clear to avoid possible confusion.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

8 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

Para 35.80 - As we described in our response to chapter 1; the fact someone else cannot undertake learning for the student is no different to the fact that one car cannot be maintained in place of another, but this does not stop us treating maintenance as capital investment. The arguments for excluding the components of human capital that directly contribute to economic production within the boundary, continue to be very weak.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

These comment concerns several chapters:

In terms of the new high-level classification of natural capital – AN1, AN2, AN3 – Chapter 35 provides a full description of the relative boundaries of the SEEA and the SNA, including via Figure 35.1 which is very helpful. Other chapters are not always consistent, and paragraph 2.22 is particularly confusing about the scope of “economic capital” and should be redrafted with reference to Chapter 35 and Fig 35.1.

The new classification – Table 11.4 – was not included in the draft SNA that we had sight of. We assume it is consistent with Table 1 in the Consolidated list document.

There seem to be significant inconsistencies across the draft SNA in respect of text referring to biological resources – cultivated / produced / migrating. There is a general lack of clarity about the criteria for classifying resources as cultivated / produced or non-cultivated / non-produced, and how the criteria relate to each other. The criteria discussed are ownership rights, potential for economic benefit, direct control, responsibility and management, and whether migratory or not. The many inconsistencies across the chapters are listed in this document.

Obvious questions for which the SNA does not provide answers are: are (migrating) fish under quota the only example of once-only non-produced biological resources?

“Land” could be more clearly defined in the SNA particularly in relation to the SEEA view of land, and in relation to the concept (practical necessity) of composite assets, underlying assets, etc. Similarly, in line with WS.8, the draft SNA could provide a clearer introduction to the concept of “underlying asset”, and its relevance for depletion and depreciation. All of these issues are mentioned, but in a disparate way over the draft chapters.

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

35.1 last sentence: "is most readily interpreted in terms of the capital..." is a strong statement. Better "may be interpreted..." or " in the SNA is interpreted...". The use of the concept of "capital" may be justified from an economic perspective, but is not necessary in an accounting perpective (unless the accounting perspective is identified with the monetary measurement perspective, i.e. non-monetary variable are ruled out).

35.3 introduces an hypothetical "aggregate indicator of real wealth to track substitution...". The reason why such an indicator would be able to "support assessment of weak and strong sustainability" is not clear. Especially strong sustainability requires mutidimensional, not aggregate, indicators.

35.7 SEEA does not measure natural capital

Figure 25.1 shows that part of "natural capital" (the natural resources) is included in the boundary of the SNA. But the same item is excluded from "economic capital". So the boundaries of the SNA and those of "economic" do not coincide anymore. At the same time, the SNA elsewhere prescribes to subtract depletion of natural resources for deriving net measures of output and income. Soin this sense, natural resources are definitely "economic"...

section B.2 "the scope of natural capital" insists that SEEA is about (measuring the components of) natural capital but SEEA does not measure natural capital.

35.24 "the sum of natural resources and ecosystem assets..." Such a sum is unconceivable in physical terms. Here the ambiguity with respect to the object of measurement in the capitals approach becomes evident.

35.29 "the contribution of natural capital to SNA products are implicit in measures of gross operating surplus". The text should be more precise: in fact it is the contribution *of the economic appropriation of natural "capital"* that are impicit etc.

Section B.2 fails to reflect the fact that the SEEA EA parts concerning economic values of ecosystems and their services are disputed and have not been included in the intenational statistical standard (e.g. 35.59 no distinction between accounts; 35.61 "the monetary value of ecosystem assets").

- **Lenka Valenta_Germany FSO**

Table 35.1 General structure of the asset accounts for natural resources - in the name of this table should be included that this is the SEEA presentation of accounts for natural resources. Please include also in the name of the table that it shows physical asset accounts.

In addition, it should be also pointed out that the coverage of natural resources in this table 35.1 is from the SNA point of view incomplete, as it does not cover cultivated biological resources (and renewable energy resources). Moreover, “timber resources” and “aquatic resources” are not as such identified in the SNA asset classification (AN.32 Natural resources).

It is also not clear to us, if the asset accounting (in monetary terms) for “timber resources” and “aquatic resources” can be regarded as completely identical in the SNA and the SEEA (due to notion of (separate) underlying assets in the SNA for these resources, etc.). Please clarify.

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4 Do you have any other concerns with this chapter?

8 Comments

- **Johannes Kleibl EU ECB Lead Data Scientist**

The G20 DGI-3 Recommendation 4 Task Team on Climate Finance is currently in the process of agreeing on a definition for green equity to be used for the compilation of climate finance statistics in the Recommendation 4 context. The aim will be to align with the proposed SNA/BPM definitions for green equity. However, to account for the possibility that the Recommendation 4 Task Team might agree on a more refined definition for green equity after the finalisation of the new SNA/BPM drafts, the Recommendation 4 Task Team would appreciate if a note could be added in the SNA Chapter 35 and the respective BPM chapter, indicating that ‘*if the DGI-3 Recommendation 4 Task Team on Climate Finance revises the definition of ESG/green debt or equity securities in the future, the SNA/BPM will align with the revised definition*’.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

YES. For the measurement and analysis of sustainability, four types of capital are identified: economic, natural, human, and social. The first two are related to the SNA and the SEEA, but there is no link to the SNA for human and social capital (as seen in figure 35.1). In this regard, clear recommendations for advancing the measurement and integration of human and social capital within the SNA framework are not identified.

In paragraph 35.34, the first part “the scope of measurement of natural resources applied in the SEEA is broader than that of the SNA” is contradicted by the last part “In addition, the SNA provides more comprehensive accounting for renewable energy resources”

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Antonella Baldassarini Italy ISTAT, National Statistical Office of Italy**

The concept of wealth is mostly used as if it was undisputed that different capitals may be aggregated (e.g. in 35.2: "non declining real wealth per capita" .."if real wealth per capita has declined then past development should not be considered sustainable"). No hint is made to the possibility that wealth be seen as a multidimensional concept, irreducible to a single scalar measure. However, this is a widespread view.
This untold bias implies that overall levels of wealth and their decline would be assessed as the sum of different "capitals", based on some common measurement basis, which of course is a monetary one.
As a consequence, monetary measurement of "natural capital" is central to the approach, and looms over the entire discussion on ecosystem assets (e.g., the importance of measuring all types of capital "beyond the monetary value" is highlighted only in 35.13, confirming that up to that point, the implicit focus was on monetary values; 35.43 gives a partial historic perspective over the development of the SEEA).

It must be noted that there is no need to adhere to the "monetising" view on multiple capitals (better: assets), in order to fulfil the purpose of the chapter: e.g. the notion of "non-declining" can be, and would be best applied, to each element of a set of assets, each of which measured by using its most appropriate unit of measure (reference to strong sustainability). Also, there is no evidence that the capitals approach has the ability "to provide a structured basis for the organisation of a relatively comprehensive set of information on sustainability..." (35.4) better than other approaches. The links between stocks and flows can be shown whether referring to the stock as "capital" or otherwise (35.6). The capitals approach is, in synthesis, not "a broad setting on sustainability" (35.7).

An important element for well-being and sustainability analysis is missing from, or hidden somewhere in, the discussion: the qualitative aspect of the stocks, in particular of produced capital. This, as all other forms of capital, is assumed to be a positive element in well-being and sustainability, while in reality it may consist in the most dangerous and harmful of things, from nuclear weapons to dams placed in the wrong places.

Non-monetary measurement can support this kind of analysis (for "natural capital", think of ecosystem disservices) while monetary measurement cannot, being assumed that all assets having a market value are able to provide positive contributions to future well-being (i.e. contribute to sustainability).

No mention is made, and no influence on the text evident, of the fact that the SEEA EA is not an international statistical standard as for the parts concerning monetary values. This, however, is a major reason of caution with using these values in well-being and sustainability measurement.
What has been written as comment to Ch.34 on ecosystem services as "income" and "consumption" is relevant for this chapter as well, to the extent that sustainability of well being is reduced to the stream of future consumption flows.

- **Amanda Driver_SA_Biodiversity Consultant**

35.20 notes that “Economic capital is a simplifying label to refer to this set of assets” and that it does not imply that the other types of capital have no economic value. It also says this supports a distinction from the long-standing SNA term “produced assets”. It may be useful to explain why the term “produced assets” can’t be used, which is not clear to me.

Section 2 The scope of natural capital

It would be useful to include cross-references to Chapter 11, where some of this content was introduced.

35.25 “Natural resources are assets that occur naturally”.

Timber is given as an example, but as noted in my comment on para 11.11, a large amount of timber doesn't occur naturally but is cultivated in timber plantations, often of exotic (non-native) species that would not occur naturally in the area. Suggest deleting timber as an example or a naturally occurring asset as it frequently isn’t.

Later in the paragraph examples of biological resources are given as “e.g. timber, fish, livestock”. Suggest adding crops as an additional major example.

A larger question (also noted in my comments on Chapter 11): Does the definition of natural resources need to be changed to “assets that naturally occur as well as cultivated biological resources” to be consistent with how the term is being used in the SNA? This would be an unintuitive definition of natural resources, so I'm not recommending this but just pointing out that it's inconsistent to define natural resources as naturally occurring assets when their scope has been broadened substantially beyond that in this context.

35.26 on ecosystem assets.

“There are a wide range of types of ecosystem assets *including forests, coral reefs, lakes, wetlands and urban areas* where each occurrence of a specific type is treated as a distinct ecosystem asset.”

Suggest changing slightly: “There are a wide range of ecosystem types, *including savannas, coral reefs, lakes, wetlands and urban ecosystems*, where each occurrence of a specific *ecosystem* type is treated as a distinct ecosystem asset.”

Because of potential confusion between forest land and forest ecosystems, suggest using savannas as an example rather than forests.

35.27

Last sentence: “In effect, accounting for the stock of natural resources has a focus on individual components of the biophysical environment whereas accounting for the stock of ecosystem assets has a focus on the combination of individual components in distinct contexts.”

Suggest rewording: “In effect, accounting for the stock of natural resources focuses on individual components of the biophysical environment whereas accounting for the stock of ecosystem assets focuses on ecosystems as communities of plants, animals and other organisms interacting with their physical environment.”

Ecosystem assets consist of more than the combination of the individual natural resources considered in SEEA.

35.29 “In contrast, when accounting for ecosystem assets a wider measurement scope is applied that recognizes ecosystem services, i.e. the contributions of ecosystem assets (*such as a forest*), to benefits both within the SNA production boundary *(such as timber*)…”

Suggest using an example other than forest ecosystems and timber, such as coral reefs and fish, or rivers and water. As I’ve noted elsewhere, there’s potential confusion between forest land and forest ecosystems (which are not the same), and timber may be provided by other ecosystem types than forest ecosystems.

35.35 about biodiversity. “From an accounting perspective, it is possible to organize data *to support the derivation of* measures of diversity at each of these levels, but diversity itself is not directly measured. For example, accounts can record the *composition of* different ecosystem types across a country and accounts can be used to record *the mix of different* species.”

This is not quite right. Suggest rewording as follows:

“From an accounting perspective, it is possible to organize data *related to* measures of diversity at each of these levels, but diversity itself is not directly measured. For example, accounts can record the *extent* of different ecosystem types across a country and accounts can be used to record *data about certain* species.

“Composition” could be confused with “composition, structure and function” which are characteristics of ecosystems. Also, accounts record the extent of different ecosystem types - this information can then be used to analyse e.g. proportions of different ecosystem types in the EAA. It is unlikely that accounts will be able to record the mix of different species at any given location or within any EAA – the task is too complex. Species accounts will inevitably focus on a few key species.

It is quite an ambitious claim that ecosystem accounts will support derivation of measures of biodiversity.

Section C Measuring natural capital using the SEEA

35.42 Refers to four broad “accounting themes” of the SEEA. They are called “measurement themes” elsewhere in the chapter. “Themes” could be confused with “thematic accounts” – suggest using a different term. Measurement aspects? Measurement foci? Measurement lenses?

The second one is “land and ecosystems”. Suggest changing this to “land, marine areas and ecosystems” (see later comment).

Table 35.1 General structure of the asset accounts for natural resources: Column 3 heading is Land (incl. forest land). Suggest making this Land (incl. agricultural and forest land)

Section C.2 Accounting for land and ecosystems

Suggest that this heading should be "Accounting for land, marine areas and ecosystems".

35.53 says "Further the scope explicitly includes all inland waters and marine areas within a country's EEZ", so the intention is to include marine areas.

Inland waters by definition fall within the land boundary of a country, so it is arguably OK to see them as included in "land". But marine areas need specific mention as distinct from land. It isn't sufficient (or acceptable) just to say in passing in 35.56 that land includes inland water and marine areas.

SEEA EA makes an effort to avoid terrestrial bias, for example saying "landscapes and seascapes" not just "landscapes", where applicable. Accounting for marine areas is an important aspect of ocean accounting and can't simply be subsumed under accounting for land.

As we have land use classifications now, it's conceivable that there may be a sea use classification in future, that could be used in accounting for marine areas, providing a different perspective to marine ecosystem accounts in the same way that a land use account provides a different perspective to a terrestrial ecosystem account.

35.54

"Tracking the *composition and changes in the composition* of a country's land use, land cover and *ecosystems* can provide important information on *the extent to which* certain areas of a country are changing (e.g. due to *urbanization*), *support measurement of changes in the condition of the environment,* monitor the balance of ways in which land is used (e.g. for agriculture) and underpin analysis of future trends. In accounting for the area of land and ecosystems data…"

In the second line, "ecosystems" should be "ecosystem types". SEEA EA does not track the composition of ecosystems, it tracks the extent of ecosystem types. In the last line, "landscape scale" should be "landscape or seascape scale".

Suggested rewording for 35.54:

"Tracking the *extent and changes in extent* of a country's land use, land cover and *ecosystem types* can provide important information on *how* certain areas of a country are changing (e.g. due to *urban expansion*), monitor the ways in which land is used (e.g. for agriculture) and underpin analysis of future trends. *Tracking ecosystem condition can provide information about how human activity impacts on the condition of the environment*. In accounting for land and ecosystems…"

35.55 Gives the following example: “The changes in characteristics may be large, for example from terrestrial to marine ecosystems in the case of sea-level rise, or the reverse in the case of reclamation projects.”

This seems quite an unusual example. A much more commonly occurring example would be: "The changes in characteristics may be large, for example when natural ecosystems are converted to anthropogenic ecosystems (such as urban areas, croplands or dams).”

35.56 “An important statistical outcome in *conceptualizing land (including inland water and marine areas)* as space, is that accounting for land then provides the foundation for ensuring a comprehensive measurement of all ecosystems and natural resources, …”

As noted in an earlier comment, it’s not sufficient to say that land includes marine areas.

Suggest rewording: “An important statistical outcome in *conceptualizing land and marine areas* as space, is that accounting for land and marine areas then provides the foundation for ensuring a comprehensive measurement of all ecosystems and natural resources…”

Further down in the paragraph: “Examples of land uses include agriculture and forestry.”

It would be useful to include another example such as nature-based recreation, which is less directly linked to certain land cover types or certain ecosystem types.

Further down in the paragraph: “Examples of land cover include herbaceous crops, tree-covered areas and grassland.”

Suggest changing “grassland” to “grass-covered areas” and adding waterbodies as an additional (inland water) example. “Grassland” is potentially confusing as grasslands are an ecosystem type. Grass-covered areas in a land cover map may or may not be grassland ecosystems.

Support the deletion of Table 35.2.

35.58 “Accounting for ecosystems commences with the delineation of a country’s area according to a classification of ecosystem types and ecosystem extent accounts. These accounts show the composition of a geographic area referred to as an ecosystem accounting area (e.g. a country, province, catchment) in terms of different types of ecosystem assets, for example, the area of forests, wetlands, mangroves, lakes and urban areas, and how this composition is changing over time. The difference between ecosystem extent accounts and land accounts does not concern the account structure but the different classification of areas. In short, ecosystem extent accounts focus on summarizing the combined ecological characteristics of spatial areas (vegetation, climate, soil, etc) rather than a single characteristic such as land use or land cover."

There are several areas of lack of clarity and potential confusion in this paragraph.

Suggested rewording:

"Accounting for ecosystems commences with delineating ecosystem assets within an ecosystem accounting area (e.g. a country, province, catchment), based on a classification of ecosystem types. The accounts show the extent of different ecosystem types, for example, forest ecosystems, savannas, mangroves, estuaries, lakes and urban ecosystems, and how their extent is changing over time. The difference between ecosystem extent accounts and land accounts does not concern the account structure but the different classification of areas. In short, ecosystem extent accounts focus on the ecological characteristics of spatial areas (based on functional, structural and compositional characteristics of different ecosystem types) rather than a single characteristic such as land use or land cover."

3.62 "The core ecosystem accounting framework can be applied in a range of different ways applying the general principles of thematic accounting as described in Chapter 38. This includes accounting for stocks of carbon, for species, for individual ecosystem types such as forests and marine areas, for specific land use types such as protected areas and for links between ecosystems and economic activities such as agriculture and tourism."

Suggested rewording:

"The core ecosystem accounting framework can be applied in a range of different ways using the general principles of thematic accounting as described in Chapter 38. This includes, for example, accounting for stocks of carbon, for oceans, and for links between ecosystems and economic activities such as agriculture and tourism."

Protected areas are not a land use – many land uses occur within protected areas.

Accounting for individual ecosystem types is not encouraged – it's better to account for all ecosystem types within an EAA.

"Marine areas" are not ecosystem types – I think this is probably meant to be a reference to accounting for oceans (which goes beyond ecosystem accounting).

See comments on Chapter 38 – the thematic accounts envisaged there don't seem to encompass most of the thematic accounts discussed in SEEA EA.

- **Lenka Valenta_Germany FSO**

35.19 -35.23 As regard "economic capital" - the SNA asset classification will newly include some *of which* items in relation to environmental issues (e.g. Renewable energy installations, Fossil fuel installations, Electric powered transport equipment, Carbon capturing equipment, Nuclear fusion equipment). These *of which* (functional) breakdowns of produced assets could be also mentioned here (with some relevant context – see recommendation D.9 (para 66).

35.21 Please check this paragraph with the content of Ch17 (Ch 17 covers not only produced assets, but also some non-produced assets).

35.25 Please check this paragraph, there are currently some duplications as regards natural resources.

35.51 Please check this paragraph, in particular the sentence "…*From this perspective, the description of accounting for natural resources in the SEEA provides a richer and more comprehensive discussion than is provided in the SNA but one which can be used to support directly the compilation of estimates for the SNA sequence of economic accounts*" in connection with the beginning of this paragraph.

Chapter 36: Input-output tables

1 Comment

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

4 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

Yes

- **Nikky Toh Singapore Department of Statistics**

We suggest to include the recording of production for own final use (as capital formation) for financial corporations, general govt & NPISHs in table 36.3 for more complete coverage of the possible scenarios highlighted in paragraphs 36.25 and 36.26.

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Mark de Haan Netherlands**

Chapter 36. 36.82 The link https://www.oecd.org/industry/ind/ICIO_2023_Development_and_applications.pdf does not work anymore.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

We suggest the re-ordering of sequence in paragraph 36.58 for consistency with paragraphs 36.61-36.62, where the illustration on fixed industry sales structures (Model C) is placed above that of the fixed product sales structure (Model D) to align with the UN Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Applications.

Similarly, the same consistency principle may be applied to the section on product-by-product input-output tables, to reorder the sequence in paragraphs 36.52 and 36.55-35.57 (Model A followed by Model B in the UN Handbook).

- **Karen Kuhn_South Africa RB**

No

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4 Do you have any other concerns with this chapter?

5 Comments

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes. Why were the social accounting matrix recommendations removed from SNA 2025; is it being considered to include them in another chapter?

Paragraph 36.30: It would be helpful to include a brief discussion on what to do when the use table is not square, especially regarding the applicable procedures in terms of product and industry classification.

Paragraphs 36.30, 36.32: The chapter uses the term "symmetric input-output tables" in several places, despite paragraph 36.31 stating that this term should not be used. It is necessary to review and correct this terminological inconsistency throughout the chapter.

Paragraphs 36.11-36.22: The section on the treatment of goods for processing is not fully aligned with the latest recommendations, as option 2 is still presented as an alternative, which is no longer recommended. It is suggested to update this section to reflect current recommendations.

Paragraph 36.3: The chapter does not adequately reflect the expanded role and importance of input-output tables, which is briefly mentioned in paragraph 36.3. It is suggested to elaborate further on this aspect throughout the chapter.

Paragraph 36.3: It is mentioned that input-output tables provide feedback on the quality and consistency of supply and use tables at current prices and in volume terms. However, the rest of the chapter does not explain how this happens, particularly in terms of volume, which is not mentioned again. It is suggested to include a more detailed explanation.

Paragraph 36.37 should be better linked with paragraphs 36.39-36.41, as these explain the meaning of A and its implications. It is suggested to reorganize or clarify this connection.

Paragraph 36.32: There is a lack of explanation of the different models for deriving input-output tables from supply and use tables, which is only briefly mentioned in paragraph 36.32. It is suggested to include a more complete explanation.

Chapter 36: The treatment of negative values in input-output tables is not addressed in the chapter. It is suggested to include guidance on this.

Chapter 36: The process of converting purchaser prices to basic prices is not clearly explained. It is suggested to provide a more detailed explanation.

Chapter 36: There is no guidance on the creation of input-output tables at constant prices. It is suggested to include a section covering this topic.

Chapter 36: In general, throughout the entire chapter, the example tables are not visible, making it difficult to follow the logic described in the paragraphs that explain these tables. It is suggested to ensure the inclusion and visibility of these tables.

Chapter 36: There is inconsistent use of the terms "input-output matrix" and "input-output table" throughout the chapter. The correct term is "input-output table." It is suggested to standardize the terminology used.

Paragraph 36.10 refers to a possible change in invoice values for the valuation of imports/exports in future updates. This topic seems out of place in a chapter on input-output tables and could be better addressed elsewhere.

Paragraph 36.31 contradicts other parts of the chapter regarding the use of the term "symmetric." It is suggested to review and correct this inconsistency.

There are formatting issues in the equations in paragraphs 36.36-36.37. It is suggested to review and correct these issues.

There is inconsistency in references to other chapters (e.g., sometimes chapter 14 is mentioned, other times chapter 15). It is suggested to standardize these references.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Jorrit Zwijnenburg_OECD**

36.3: It may be good to mention that multi-country input output tables also form key inputs for environmental footprints.

Chapter 37: From-Whom-To-Whom Tables and related financial indicators

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

7 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Laura Wahrig _Eurostat**

Laura Wahrig / Floris Jansen ESTAT D.1 GFS: No

The change from ambiguity between debtor/creditor and transactor approach to a support of the transactor approach was not part of the consolidated list of recommendations. Please refer to our previous comments on this chapter, which seem (mainly) not reflected in this updated draft.

Moreover, we understand BPM 6&7 both offer necessary flexibility for using the debtor approach for currency and economic unions, while SNA does not. In the EU/EA economies, it seems even more necessary than for other economies to use the debtor/creditor approach. Not offering this flexibility for the debtor/creditor approach in the SNA implies that one of the main stated goals of the update of the manuals will be missed: the consistency among international macroeconomic statistics manuals.

It is not even clear exactly what is being consulted here: the chapter was missing off the pdf file circulated, and the chapter now in the wiki indicates further discussions in July (presumably July 2024) and communication of a resolution "in due course". As of know, it is is not even public exactly what you are consulting on, therefore an inclusion of these proposed changes (if they are proposed) seems doubtful.

As the previous comments are no longer accessible, we paste them below:

In general, we have the following remarks on this chapter on whom-to-whom matrices:

The main problem we see with this chapter is that it promotes the transactor approach over the debtor/creditor principle, which was not part of the consolidated list of recommendations, nor part of the issues discussed in task teams (despite European requests to do so). We do not see where and how this major change in the SNA, which was before at most ambiguous was agreed. Moreover, even the ambiguity introduced in 2008 SNA was not part of agreed changes at the time.

In the ESS export group EDPS WG of June 2024 a document regarding the drafting on the new ESA will further discuss this issue (as well as other issues).

For full transparency this is the text regarding this main issue to be discussed in the upcoming EDPS WG:

Debtor/creditor versus transactor principle.

1. As an aside, it can be noted that factoring is a splendid case of application of the 'debtor/creditor principle' versus the 'transactor principle'. The new ESA should be more forceful about this, having in mind the erroneous and apparently successful attempts to implement the transactor principle in the ongoing drafting of the SNA. This erroneous attempt is both on substance and on procedure. The SNA review has repeatedly rejected European Directorate D requests to treat this in a guidance note, and thus should not implement this without broad based consultations.

2. The debtor/creditor principle entails that, in the detailed financial accounts ('whom to whom'), a secondary market bond sale between A and B is described as a redemption of bond by the debtor to A and a new issuance in favour of B. This reporting convention permits reconciling the balance sheet positions with transactions in a whom-to-whom basis, without generating absurd other economic flows.

3. It has been explained many times that the fact that the debtor is typically not aware of the transaction does not prevent a transaction recording (thus some argue that there is no mutual agreement, and therefore no transaction), because the fact that the debt issued is tradable *de facto*implies the debtor agreement. In addition, the debtor indirectly knows the creditor, through the banking sector, in order to pay the coupon. Finally, in bond trading operating on a central counterpart basis or through market makers, which is very common, the transactor is not known and in fact is the CCP/market maker – rendering transactor basis information useless. As an example, governments often issue bonds through designated dealers who are only intermediaries

though exposed to risks/rewards, and are not the final investors. Reporting data on a transactor basis is simply worthless.

4. In the case of factoring, there should be no difficulty in saying that the factor finances the good buyer rather than the good seller, because, though the factor effectively passes the cash to the seller, the factor *de facto*knows that his obliged party is the buyer (it even is its only obliged party in case of no-recourse factoring). Applying the debtor/creditor principle is thus perfectly legitimate economically. This is a splendid illustration that the debtor/creditor principle is not an obscure issue applicable to far remote detailed financial accounts tables that few consult, but can have direct consequences on primary statistics (government debt).

5. Applying the transactor principle creates massive OCV across the system, preventing the crucial plausibility checks for holding gains and losses. This is a basic/essential quality checks where compiling financial accounts. Also, only the debtor/creditor principle can lead to a correct consolidation in transactions (i.e. comparison of [ESA] Table 27 consolidated and nonconsolidated).

6. Applying the transactor principle to equity would be a compilation and monitoring disaster in this same respect.

7. It is also elementary to understand that paying in bank notes goods must be reported as a redemption of bank notes to the buyer and an issuance to the seller, otherwise banking transaction statistics would be meaningless. There is no OCV in bank notes on such a basic event.

8. It can be noted that the SNA 2008 introduced para 12.67 seemingly prescribing the transactor principle, without consultation. In that SNA review at that time, a fixed list of topics had been decided and this issue was not one of them. The issue was thus introduced without discussion and presumably by an SNA editor at that time who was not fully aware of the compilation practices in the financial accounts.

9. As has been mentioned many times, the BPM5 had contradictory paragraphs, some pointing to the debtor/credit principle, some to the transactor principle. BPM6 has deteriorated with slightly more emphasis on the transactor principle. BPM7 was an occasion to tip back the balance to BPM5, which seems to be about to be missed.

10. As it turns out, in the draft 2025 SNA, numerous references to the transactor principle have been inserted, while this topic has not been discussed in the context of the SNA update – despite European requests to put a discussion on the table. Apparently, the new references to the transactor principle are planned to be retained, and no discussion on it will take place. Moreover, it is planned to put the transactor principle on the research agenda of the SNA, rather than the BPM.
11. In this context it should be noted that for key comparison issues, European BPM apply by exception the debt-creditor principle, so that this would leave it impossible for the new ESA to be both consistent with BPM in Europe and with the SNA.
12. In contrast, the ESA 1995 was even more clear and elaborate on the debtor/creditor principle, and the new ESA should reestablish wording to that effect.

Other general comments:

We note that different names are used for party/counterpart: “issuer/holder” in the tables while in the text “debtors/creditors” is used (e.g. table 37.3). This terminology seems furthermore inconsistent as a matrix showing transactions using the transactor princple is expected to show not the issuer but rather the old holder (seller) and the new holder (buyer) of the asset in a matrix. Moreover, has it been discussed how such a cubic structures (issuer, buyer, seller) will be presented (even only on annual basis)? In case it has been discussed, it would be good to actually show this three dimensional structure would be presented in two dimensions within this SNA chapter (e.g. in place of table 37.3).

In general, please use one term for one phenomenon (e.g. either use 'stock' or 'position'). In general, some of the terms used seem not in line with the proposals in draft SNA chapter 21. If indeed there is an advantage in changing the terminology, this should be applied consistently. If the current drafts prove that this is not possible to do, then it would be better to stick with established terminology instead of creating text that only experts familiar with old and with new terminology can decipher.

On a positive note, we very much appreciate the use of sector codes throughout this chapter as it helps the reader understand when an SNA / Institutional sector is meant and when not. It would be advisable to extent this logic also for transactions and stocks, especially when discussing implicit services (formerly known as FISIM).

It is important to be very precise when discussing SNA interest (D.41) or ‘bank interest’ (D.41g) especially when the ‘totals’ of D.41 are recording using the debtor/creditor principle while the whom-to-whom framework is not. Also, there are errors in the sector codes (in particular in table 37.4), please correct this.

▯ Rosie Maslin_UK Government Response

Yes

▯ Karen Kuhn_South Africa RB

Yes

▯ Nicola Massarelli_Eurostat

Para 37.13: we look forward to seeing the text on the transactor vs debtor-creditor approach. As you know, we prefer the latter. Using the debtor-creditor approach should be mentioned at least as a possibility, in line with BPM7.

▯ Sarah La Rosa Belgium National Bank of Belgium

We do not support the fact that this chapter promotes the transactor approach (against the debtor/creditor principle) which prevents the readability of the financial accounts in a whom-to-whom perspective by generating multiple OCVs.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

7 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Laura Wahrig _Eurostat**

Floris Jansen / Laura Wahrig ESTAT D.1 GFS

No, see our comments on the promotion of the transactor principle under question 1.

Some specific comments, mostly overlapping with previous comments.

In **paragraph 37.3** it could be helpful to state that SNA is a quadruple accounting system, thereby accounting for party and counterparty.

It would be clearer to add codes (e.g. D.41 for interest and other similar income) and use the (changed) terminology consistently throughout the draft SNA. E.g. in **paragraph 37.5**, a comment we made regarding a change from "interest" to "interest and other similar income" was taken on board, but not applied consistently. Future readers (e.g. compilers) will presumably consult the SNA on ad-hoc basis, i.e. not read a whole chapter at a time. Therefore every paragraph should be clear on its own. In paragraph 37.5, "hereafter referred to as interest" is added. It would actually be better to use the full new term consistently. If the drafters find the new terminology to cumbersome, maybe it should be taken as a clear sign that it will not be actually used in communication in national accounts and therefore should be reconsidered.

In **paragraph 37.7** there are references to other manuals: "*This chapter complements Chapter 8 of the Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG) 2016 that deals with financial statistical tables and the IMF's balance sheet approach to financial stability work, as well as the chapter 6 of the UN handbook on Financial Production, Flows and Stocks in the System of National Accounts (FPFS) 2015 that discusses the from-whom-to-whom tables*". It is not clear what this adds to this SNA chapter. If parts of these manuals are relevant these parts should be taken over in full. Also, are these other manuals also promoting the transactor approach over the debtor/creditor principle (same for **paragraph 37.31**)?

In **paragraph 37.10** makes reference to the "*global financial crisis that began in 2007-08*" making the whom-to-whom presentation more relevant as "*This crisis clearly showed the relevance of these interdependencies, and the related financial risks and vulnerabilities, between sectors and countries, leading to a cascade of events spreading across the world*". In our view the debtor/creditor principle is needed for such analyses as the information on the issuer (the debtor) is needed rather than the transactor approach that is advocated in the chapter. This is (somewhat cryptically) noted in paragraph 37.13 "*without explicitly accounting for the changes in the counterparty sectors of the debtors as financial transactions*". Therefore, this chapter seems internally conflicting.

In **paragraph 37.12** we note that different names are used in the table ("issuer/holder") as compared to the paragraph ("debtors/creditors"). Please use one term for one phenomenon. Also, the arrows used are not clear, as it could be interpreted as if the issuer/debtor is portrayed in the rows as this is where the arrow points to, but it is not, the issuer is in the columns (as we think to understand). The arrow portraits to whom the liability is to, but this is not explained. Therefore, please either consider to delete the arrows and simply state 'Issuer in the columns' and 'Holders in the rows' or explain the arrows. Also, it might be considered to rename 'All holders (matrix total)' into 'total holders (total assets)' while 'All issuers (sector totals)' should change into 'All issuers (total liabilities)' as 'matrix total' and 'sector total' is not clear.

Table 37.1: typos in the first cell.

Paragraph 37.13 should explain the transactor approach but fails to provide the necessary clarity. In particular this sentence is too long to be comprehensive: "*In particular for tradable securities, the transactor approach means that for primary market transactions new issues (liability) and the purchases (asset) of those issues are netted (i.e.,* ***gross new issues are recorded net of redemptions/repurchases****); and in the case of subsequent secondary market activity, the asset-side transactions in those same securities are also shown net (i.e., purchases less sales)* ***without explicitly accounting for the changes in the counterparty sectors of the debtors as financial transactions****.*" First bold: how can you net in a whom-to-whom matrix new issuance with redemptions if the counterparty is not the same? Or do you mean netting at the level of counterparty? Second bold, if there is no 'explicit accounting' is there an 'implicit accounting'? Also, shouldn't you explain why it apparently isn't problematic to lose this information also in line with the data gaps on noted during the financial crisis (which was also a debt crisis)? Finally, this paragraph uses 'net' to mean 'minus redemptions/repurchases' while we understood (from chapter 21) that this term was reserved to mean 'minus consumption of fixed capital (P.51c redubbed 'depreciation') and depletion'.

Newly added **paragraph 37.14**: we do not have issue with this newly added paragraph, which provides sensible and pragmatic guidance when compiling counterpart transaction by the debtor-creditor approach, but we fail to see how recognising that balance sheet data (necessarily compiled on debtor-creditor basis) is more reliable should should be of any help whatsoever when using the transactor approach when compiling counterpart transactions?

The whole **section 2** "*FWTW-information in a time series format*" seems redundant. The purpose seems to show that you can transpose a matrix into a normal table using 'of which' items. This seems not needed. Please also avoid using the word 're-arrange' for this process as for this as 're-arrange' has a very specific other meaning in national accounts.

- **Celestino Giron_ECB**

No. It is not clarified what entries are expected for fwtw transaction matrices under the proposed "transactor approach"

- **Laura Wahrig _Eurostat**

cont'd from above:

In **paragraph 37.18** we read "*Although the FWTW-tables presented above show information on the interrelationships between the **main sector** for a certain financial instrument, they are still aggregated ones that, while useful, may be somewhat limited in their analytical capacity. For example, it may be important to know the long-term and short-term split of debt securities, or to have details on debt securities denominated in domestic currency versus those denominated in foreign currency.*". It is not clear what is meant with 'main sector'. Also, in the example detail is discussed on instruments (i.e., related to stocks, transactions and OEF) not sectors.

In **paragraph 37.21** the whom-to-whom matrix for investment income (D.4) is discussed. The last sentence reads "*For example, the relationship between interest or dividend transactions in the current accounts with related debt or equity instruments in the balance sheets, together with information on holding gains and losses can generate average implicit yields that help to interpret the financial positions of sectors*". It might be understood as if for D.41 the debtor/creditor approach is used while for the financial instrument the transactor approach is used. The wording 'implicit yields' seems to refer to the payment schedule as set at inception (i.e. the debtor/creditor approach).

Paragraph 37.22 The terms social contributions and social benefits are used. National accounts, in its core works on the basis of institutional sectors. The counterpart of social contributions and social benefits is always households or S.2. What could be the added value? If detail is needed on the employer, labour statistics seem more useful and suitable. Otherwise, the main sector accounts framework can be used. No need for whom-to whom.

Paragraph 37.30 it reads: "*Security-by-security (SBS) data are compiled by many countries for use in the compilation of financial accounts and balance sheets. Data on new issues of debt and equity securities can be obtained from corporations supporting these markets, such as flotation corporations and exchanges, or from companies that compile and sell this information. Such databases include the new issues of securities, broken down by security, and they usually also include information on the terms and issue rates of the security, the redemption, the current value, the currency of issue, the security identifier number, and other details (sometimes the initial purchaser), etc. In the case of debt securities, this supplementary information can allow for the calculation of market values, revaluations and **accrued interest**. This high-quality information can replace survey data and provide the sub-instrument detail in FWTW-tables for issuers (liability side), such as currency, maturity and interest rate breakdowns*". It is unclear how the accrued interest should be attributed to the counterparty both in the matrix of D.41 and in the matrix of the relevant financial instrument taking into accounts that the transactor approach is used for the inner framework but not for the totals where the debtor/creditor approach is taken, see also BPM6 paragraph 11.52-11.53.

In **paragraph 37.33** the sentence "*While in a contagion situation, the transmission effects can be traced with the help of FWTW-tables.*" Seems to use a virus metaphor for the global economy and its interlinkages. However, it is not clear what is meant with 'contagion situation' here. In general SNA should avoid talking in metaphors.

In **paragraph 37.35** reads this sentence: "*Some indication might be gleaned from a FWTW-table for total loans, however the foreign currency transactions would be partially masked by transactions in domestic currency (which could be partly offsetting)*". It seems that this information is better attained not via FWTW tables but by looking at other economic flows (revaluation, K.7). This information is however lost in the FWTW table by using the transactor approach, which makes the link with balance sheet positions (opening balance + transactions + other economic flows = closing balance) useless. In other words, this paragraph is actually rightly advertising the use of the debtor/creditor principle! Please, at the very least, recognise this problem of the transactor approach rather than imply that the proposed data presentation could help in these analytical problems.

Paragraph 37.37 is writing down in text, what every-one can also see in the **table 37.3** above. What is the value added of this? It doesn't' explain at all why these transactions are taking place in the context of an appreciation of the domestic currency and why they take place in this order (1-2-3). It is much simpler to discuss foreign exchange fluctuation in the context of revaluation (K.7) instead of transaction as such fluctuations are not transactions (no-mutual agreement). Therefore, it seems a non-sensical argument for developing (quarterly) FWTW-table in foreign currency. Although there is merit in looking at such data in foreign currency (more in relation to stocks than transactions though) to try to determine exposures to foreign currency, without looking at derivative contracts (AF.71) that hedge for these differences it seems a half-baked attempt, when using nominal value rather than face value.

Paragraph 37.38 seems to ask for even more details without explaining why this is needed. Furthermore, we read this sentence: "*Other financial instruments' foreign currency tables would add to the understanding of how economic agents in the economy more fully adjusted to the exchange rate movement*". As an exchange rate is just a relative price driven by supply and demand (just as any other price fluctuation) it is influenced by the (expectations of) these 'economic agents' (institutional units?) that decide this price. Therefore, it seems that the 'adjustment' (which is a reaction not the cause) seems a bit circular.

Paragraph 37.39 seems strange to not mention specifically the United States of America (USA) in this sentence "*Another example concerns the impact of a financial crisis for which the catalyst was largely a sustained and significant housing bubble and a related problem of overextended credit in a mortgage market in a large economy*" as the USA is specifically mentioned in paragraph 37.23: "*As an example, many country analysts were interested in exposures to US banks during the financial crisis*". The SNA should choose to either not 'beat about the bush' in naming countries as in **37.24** or indeed be more discreet as in **37.39**. Both are fine but a consistent approach might be followed. However, generally, the focus on one economy in the rest of the world seems strange for a national accounts manual. This is balance of payment territory and national accounts is not suited to answer these questions.

When discussing 'term structures and maturities such as in **paragraph 37.41** please indicate clearly if you are taking about original or remaining maturity.

In **paragraph 37.43** information on D.41g (thus without the deduction of FISIM) is considered most relevant for calculating interest rates. We agree. However, this isn't necessarily a discussion that seems relevant in the context of FWTW tables as the counterparts of FISIM are restricted to (S.122, S.125 and S.2). Please discuss this in more relevant parts of the SNA (such as chapters 4 or 25). Moreover, it should be clarified in the chapter 12, that the accrual of interest on the instrument refers to D.41g rather than D.41 (SNA interest). It can be deduced from the paragraph on other accounts that this is the case, but it should be clearer (as for example in ESA 2010). **Table 37.5** should be compiled based on D.41g (and using debtor approach!) and this should be reflected in the labels accordingly. Similarly, **37.54** should talk about D.41g to debt.

In **paragraph 37.44** we read "*The overall return on an instrument can be thought of as the property income and holding gains or losses. Holding gains/losses from the revaluation account can also be presented in a FWTW dimension*". Please note that for the totals when using the debtor/creditor principle the interest payments are fixed at inception and the revaluation of the instrument at market value (for debt securities) entails the interest fluctuation from that moment onwards. For deposits and loans that are valued at nominal value, revaluations of the totals are solely expected for foreign currency denominated loans but that is discussed in the previous part. Therefore, it is not clear what is meant here.

In **paragraph 37.48** the balance sheet approach is said to examine the 'main sector of the economy' while in **paragraph 37.51** the 'economy's major sectors' is referred to. It is not clear what this entail, e.g. 1-digit sectors S.11, S.12, S.13, S.14, S.15 and S.2? Or specific important subsectors like S.122? Again, please use one term for one phenomenon throughout SNA.

In **paragraph 37.51** the term 'mismatches' is used. As the SNA is not meant to be an auditing system it seems that SNA should better refrain from such judgmental terms. For example, when discussing 'Maturity mismatches', banks can have liquid deposits as liabilities and illiquid loans as assets. This doesn't necessarily imply there is a 'mismatch' as this is all part of the normal funding strategy of the bank. Also, when discussing such 'mismatches' it might be useful to mention that such risks can be hedged using derivatives contracts, implying that analysing a FWTW matrix of just one instrument (e.g. loans in foreign currency) is not a sufficient analysis.

When discussing the debt-to-equity ratio it can be stated this this is impacted by which method equity is compiled (i.e. when not quoted).

The part on solvency issues reads: "*Solvency issues cover instances where current financial assets and expected future revenue streams are insufficient to cover the liabilities, including any contingent liabilities. This situation can occur due to sustained weak income performance and/or a gradual build-up of debt, or it can arise in conjunction with some of the other situations described above.*". It is not clear what guidance is given here to compilers. Should they estimate 'future revenue streams'? How? And how should they value contingent liabilities as, per definition, these are uncertain amounts? It seems that business accounting is being mixed with macro-economic statistics here.

In **paragraph 37.53** on the part 'For corporations' it is not clear how useful business accounting/valuation concepts such as 'Tobin's Q' are to aggregates in macro-economic statistics as the corporate sector is composed of very different institutional units.

On the part 'For all sectors of for the economy' it should probably be stated that residual (not original) maturity should be taken to analyse such risks.

In **paragraph 37.54** we noted that **"***For government gross or net debt to GDP/GNI ratios have been in use for a long time for various purposes (e.g., debt sustainability, the ability for fiscal stimulus, etc.). These measures can be enhanced by further breakdowns of debt in selected FWTW-tables."* was adjusted and a new sentence added to say the same but remain equally vague on what financial assets should or could be netted. So, our comment remains the same: it is not clear what assets should be netted (deducted). There has been a longstanding debate on what assets are considered liquid enough to be considered. Therefore the added sentence would better be dropped in our opinion.

- **Karen Kuhn_South Africa RB**

Yes

- **Nicola Massarelli_Eurostat**

Table 37.5: “Held by Households” (8^{th} row) should be replaced by “Received by households”. One label should be used for “time deposits” and “term deposits”? We suggest replacing “Total demand/time deposits” by “– Total received demand/time deposits”.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Celestino Giron_ECB**
    - The "transactor apporach" proposed in the chapter for financial transactions implies inconsistencies with the treatment of cross-border transactions in BPM7.
- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Laura Wahrig _Eurostat**

Laura Wahrig / Floris Jansen ESTAT D.1 GFS

Yes, the proposed approach on whom to whom for transactions leads to inconsistency with BPM, therefore missing a key goal of the update.

Please also refer to our detailed comments under previous points.

- **Karen Kuhn_South Africa RB**

No

- **Nicola Massarelli_Eurostat**

Should section A be renamed “Chapter overview”, as in chapter 1? It would be useful to ensure consistency across chapters.

4 Do you have any other concerns with this chapter?

6 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Celestino Giron_ECB**

The "transactor approach" approach required for financial transaction matrices implies:

  - severe compilation difficulties.
  - difficulties in the interpretation of the matrices, which can become sparse matrices (i.e. for securities mainly settled via clearing houses).
  - stock-flow reconciliation artefacts leading to difficulties in the interpretation of implicit matrices for other changes in the volume of assets.
  - reconciliation (and interpretation) difficulties arising form the co-existence of transactions in securities between agents and transactions due to accruals.

- **Laura Wahrig _Eurostat**

Yes:

a) the chapter is too long for the information it provides and strays into describing untested compilation possibilities, e.g. section 4. Risk of errors can be mitigated usefully by keeping the text short, avoiding duplication and focusing on text that is needed for SNA compliant compilation of core accounts.

b) as mentioned above, it is not clear exactly what is being consulted on - see comment above. Such a situation should be avoided.

c) unclear terminology: see our comment on "interest and other similar income". Also "positions" was changed to "stock". However, the change seems not coordinated as chapter 33 is still called "transactions and positions". Please ensure harmonisation; this benefits translations and all readers, but particularly readers whose native language is not one in which the SNA is translated and readers that want to do a text search.

- **Karen Kuhn_South Africa RB**

No

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

In section B **Overview of table structures and additional considerations**, we suggest including additional disaggregations to capture more precisely some activities of the informal financial sector. For example, it would be useful to separate bank loans from non-bank loans (or collateralized loans). Similarly, we propose to disaggregate activities related to foreign exchange trading, both in the formal and informal market, particularly in exchange control contexts. This type of activity may be common in economies with high levels of informality.

In section **E. 'Related Financial Indicators'**, we suggest prioritizing the indicators presented and including examples that illustrate their practical usefulness. In particular, for the indicators related to the exchange rate, it would be convenient to include information on the current exchange rate regime, as well as to consider the existence or absence of capital controls.

Chapter 38: Thematic Accounts

1 Comment

- **Simon Schuerz**

Comments by the Environmental-Economic Accounts Sections at the Federal Statistical Office of Germany:

Chapter 38:

38.10: It is not clear why only extended accounts might involve the use of experimental methodologies, but thematic accounts might not. Either move the last sentence to A. or 36.6 or add a definition of "experimental methodologies".

38.13: It should be made clear in this section (38.13) that SEEA accounts are themselves not extended SNA accounts. SEEA accounts are not necessarily conceptually consistent with the SNA. Due to the different focus and the perspective of the SEEA, such deviations are necessary. However, extended SNA accounts may draw on the guidelines and data from SEEA frameworks and accounts. Since "statistical standards" are not explicitly mentioned in 38.13, it should be noted that the monetary accounts of the SEEA EA are not yet part of such standards.

Some SEEA accounts can also be thematic accounts that provide a more disaggregated perspective on a phenomenon (e.g. environmental tax accounts). Therefore, the reference to SEEA should be made earlier in this chapter or for thematic accounts as well.

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

5 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

The chapter seems to have received very minimal revision – which is good to the extent that we didn't previously have any issues with what was there, but we had hoped that the chapter would be more substantial. We are happy to see the short section on externalities make it through to the near-final version.

- **Karen Kuhn_South Africa RB**

Yes

- **Leandry Moreno_WTO**

UN Tourism welcomes the revision of the SNA and the final draft prepared for the global consultation.

We suggest to include in paragraph 38.28 the reference to the Statistical Framework for Measuring the Sustainability of Tourism that has been endorsed by the UN Statistical Commission at its 55th session, in March 2024 (https://unstats.un.org/UNSDWebsite/statcom/session_55/documents/BG-4a-SF-MST-E.pdf). This reference would add to the one on the TSA: Recommended Methodological Framework.

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

4 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

- **Amanda Driver_SA_Biodiversity Consultant**

38.2 May be useful to clarify the relationship between thematic accounts discussed here and thematic accounts discussed in SEEA EA. The examples of thematic accounts in 38.8 and 39.9 don't include any examples from SEEA (e.g. accounting for biodiversity, accounting for oceans). Could work to say that thematic environmental accounts are different from thematic economic accounts.

38.8 “Most thematic accounts cover a key activity”. This is not true of thematic accounts in SEEA EA.

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

4 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

- **Lenka Valenta_Germany FSO**

38.4 Labour market accounts belong to “the other parts of the integrated framework”, (see para 3.77), thus they should not be mentioned in this chapter.

38.13 The SEEA-CF is internationally recognized standard, therefore it should not be included under the heading “Extended accounts” in this SNA chapter. We also see as rather controversial to include the SEEA – Ecosystem accounting under the SNA extended accounts.

Heading: C Tools for developing a thematic account - Ch21 provides a taxonomy for statistical products. In para 21.80 a clear difference between “a table” and “an account” (has always a balancing item) is made and this distinction should be followed in naming all various statistical products including extended/thematic accounts and extended/thematic tables.

These provisions from Ch21 does not seem to be followed in this part of chapter 38, i.e., extended or thematic SUTs shall be described as tables (and not as accounts).

4 Do you have any other concerns with this chapter?

4 Comments

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Rosie Maslin_UK Government Response**

There was previously very helpful text, such as the description of functional classifications, that was present in 2008 SNA chapter 29. While there is a very brief reference to functional categories in SNA 38.23, the annex X to which the reader is directed is not included.

This chapter would be better merged into another chapter.

- **Karen Kuhn_South Africa RB**

No

Chapter 39: Informal Economy

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1 Have the agreed recommendations for the update to the 2008 SNA that are relevant to this chapter been reflected appropriately?

8 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **María Marcela Harriague_INDEC Argentina**

yes

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

yes

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Rosie Maslin_UK Government Response**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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2 Is the material in the chapter clear when it comes to the conceptual guidance provided?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

yes

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

Yes

- **Angel Fernando Pineda Solis _Mexico INEGI**

Yes

- **María Marcela Harriague_INDEC Argentina**

No

We believe that it would be highly relevant to expand the treatment of the Non Observed economy (NOE) in this chapter. The different aspects included in the NOE are essential to ensure exhaustiveness. It would also be convenient to include the different typologies of Non-Observed Activities discussed in OECD (2002) and their definitions. We suggest including "Table 3.1 Classification of non-observed activities by type of activity, cause and unit" from OECD (2002) including the typologies (T8) aggregated by Eurostat. In the case of illegal activities, reference could be made to what is included in Chapter 7.

Response made on behalf of the Technical Directorate of INDEC.

- **Nikky Toh Singapore Department of Statistics**

Yes

- **Karen Kuhn_South Africa RB**

Yes

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3 Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

6 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

No

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

No

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **Seda Movsisyan Armenia Statistical Committee of the Republic of Armenia**

No

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

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4 Do you have any other concerns with this chapter?

7 Comments

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

As the dependent contractors have been introduced as per ICLS21, elaboration on it is needed more with few more examples.

- **Mahesh Chand Pradhan _NEPAL National Statistics Office**

Also from policy perspectives, the methods of generating the contribution of informal economy or informal sector or informal employment in gross domestic product is more demanded. If it could be elaborated with brief methods or some descriptions, it will be helpful in deriving such indicators consistent;y.

Similarly, the main data sources of informal sector and informal employment are for example economic census and labour force surveys respectively. Some briefing on standard methodology and scope of conducting economic census if described briefly, it will be useful to many NSOs for conducting economic census consistently. As conducting population and housing census, UNSD often develops the recommendation manuals but for conducting economic census, there does not exists standard recommendation manuals till now. Emphasis should be given for conducting economic census if there is prevalent of informal economy.

- **Andrea Pereira Colombia NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS - DANE**

39.2 If there are agreed-upon definitions for informal economy, non-observed economy, informality, illegality, and other related terms, it is suggested to list and incorporate them in order to conceptually, technically, and statistically delineate them.

39.4 It is necessary to specify a reconciliation mechanism between employment data and the socioeconomic behavior of the household institutional sector. This implies recognizing an integrated framework where, in addition to employment, consumption, expenditure, and accumulation transactions are related, providing more information for the contextual analysis of informality.

39.5 In the case of cross-border flows, it must be ensured that external sector statistics establish measurements of the informal economy and its reconciliation with national accounts, for both informal trade of goods and services, as well as employment, remittances, the tourism sector, undeclared trade, and transfers.

39.7 In addition to the list of compilable information sources for estimation, it would be useful to have examples of case studies or experimental statistics on the structuring and measurement of the informal economy that could be replicated.

- **Angel Fernando Pineda Solis _Mexico INEGI**

No

- **María Marcela Harriague_INDEC Argentina**

Response made on behalf of the Technical Directorate of INDEC.

In Figure 39.2, placing the labels inside the bubbles and referring to the solid line bubble as 'Not observed' and the dashed line bubble as 'Observed' would allow for a clearer understanding that, while the NOE and the informal economy share common aspects, the non-common aspects are also relevant to measure and assess Non-Observed Activities.

- **Nikky Toh Singapore Department of Statistics**

No

- **Karen Kuhn_South Africa RB**

No

Responses from the BPM consultation

General comments on the chapter

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1. Have the agreed recommendations for the update to BPM6 that are relevant to this chapter been reflected appropriately?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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2. Is the material in the chapter clear when it comes to the conceptual guidance provided?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

Yes

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3. Are there any errors in this chapter, or inconsistencies either within this chapter or with other chapters?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No

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4. Do you have any other concerns with this chapter?

1 Comment

- **Regina Loo _Singapore Department of Statistics**

No
