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AI.1 Valuation principles and methodologies

Cover-note to Guidance Note AI.1 on Valuation Principles and Methodologies

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Introduction

1 This cover-note provides an overview of the progress regarding the drafting of Guidance Note (GN) AI.1 on Valuation principles and methodologies, of which a provisional version has been attached. As the GN is still work-in-progress, it is not yet considered useful to have an extensive, in depth, discussion of the GN at the meeting of the Advisory Expert Group (AEG) on National Accounts, although more detailed comments and suggestions are very much welcomed, and could be provided in writing after the meeting. Instead, this cover-note puts forward a couple of issues, which have been discussed at the latest meeting of the Task Team dealing with valuation principles and methodologies, held on September 20, 2022.

Principles for valuation

2 There has been quite some discussion on the valuation principles of the SNA. Some argue in favour of "market prices", which is how it is currently framed in the 2008 SNA (and in the Balance of Payments Manual (BPM)). Others, however, have a clear preference for the use of "exchange values" as the principle for valuation, mainly because the use of market prices in a non-market context looks slightly odd and inconsistent. They would also add that market prices, being first and foremost a method for valuing transactions and positions, should not be considered as a principle. On the other hand, some would argue that "market prices" can be looked upon as a principle, because that is what the SNA (and BPM) aims for. It also provides guidance on what to do in the case of non-market transactions. Moreover, "exchange values" can only be considered as a principle when it is accompanied by a definition as to what it means, as the intuitive understanding of "exchange values" is the value for which things are exchanged, in which case one would accept any transaction price, regardless of whether it is a market price or not. One could thus argue that, in the case of finishing up with the use of "exchange values" as a principle, one would arrive in the odd position of having to define it in a way that rejects the actual exchange values, regarding which the 2008 SNA currently provides clear and indisputable guidance, at least from a conceptual point of view. Whatever the case, it is considered necessary to arrive at a "clean" terminology, based on a more extensive evaluation of the pros and cons of the two terms.

3 Whatever the terminology used for framing the principles for valuation, it seems that all participants of the Task Team agree with the following elements for defining the principles for valuing transactions (and positions), in line with paragraphs 3.118 and 3.119 of the 2008 SNA:

- First of all, *"the SNA does not attempt to determine the utility of the flows and stocks that come within its scope. Rather, it measures the current exchange value of the entries in the* *accounts in money terms, that is, the values at which goods, services, labour or assets are in fact exchanged or else could be exchanged for cash*".

- Secondly, transactions should be valued consistent with "*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*".
- Finally, the prices paid or the exchange values *"… should not necessarily be construed as equivalent to a free market price; that is, a market transaction should not be interpreted as occurring exclusively in a purely competitive market situation. In fact, a market transaction could take place in a monopolistic, monopsonistic, or any other market structure".*

4 In addition, paragraph 13.16 of the 2008 SNA states the following, when it comes to the general rule or principle for valuing positions: *"For the balance sheets to be consistent with the accumulation accounts of the SNA, every item in the balance sheet should be valued as if it were being acquired on the date to which the balance sheet relates. This implies that when they are exchanged on a market, assets and liabilities are to be valued using a set of prices that are current on the date to which the balance sheet relates and that refer to specific assets*"

5 Importantly, transactions (and positions) should be valued "at arm's length" prices. This implies that, for example, transfer prices or (lower) interest rates in concessional lending should, in principle, be adjusted to market conditions. However, the SNA does not always provide strong guidance on the adjustment of prices or exchange values in these circumstances, mainly for reasons of feasibility. Another important element in valuing transactions (and positions) is that the prices or exchange values should not contain elements of consumer surplus.

Valuing non-market transactions and market conditions

6 As noted in the above, the SNA does not explicate a certain market condition in the case of market transactions. However, the use of assumption regarding market conditions may be extremely important in the valuation of transactions and positions in a non-market context. It certainly is a crucial element in some of the valuation methodologies for ecosystem services and assets. The question is whether one should always assume perfect/competitive market conditions, or that it is also considered viable to apply alternative market conditions. The latter can become quite problematic, as in the case of, for example, monopolistic behaviour, this could potentially lead to rather extreme and unrestricted valuations.

7 In the discussion on this topic, participants of the Task Team seem to agree that one should not prescribe certain market conditions (other than the 'arm's length' criteria mentioned in paragraph 3 above). Instead, it is preferable to make a distinction between whether or not information on similar markets is available. If such information is available, this could also be used in the non-market context. On the other hand, if such information is

not available, competitive market conditions would be the logical fall-back solution. It was also suggested to further elaborate on the market structure and the maturity of relevant markets.

Valuation using market prices of similar products/assets

8 When it comes to the valuation of transactions and/or positions using market prices of identical or similar products/assets, one may want to make much more explicit that the markets from which the prices are derived need to be “representative”, i.e. not too thin and volatile, and/or not regulated by, for example, government interventions. The latter may be the case for owner-occupied dwellings where government-controlled rentals may not be considered appropriate.

9 The above conditions may also show to be quite relevant in the case of, for example, second-hand capital goods and (transfers of) natural resources. In the case of valuing fixed assets, which are used in the production of goods and services over a considerable period of time, the current guidance in the SNA looks slightly ambiguous. For these assets, two basic approaches can be distinguished, the first one based on the market prices for similar (second-hand) assets, and the second one based on the contribution of capital services to the production process in the remaining service life of the asset. The latter approach is usually approximated by estimating the written-down replacement cost, adequately adjusted for changes in prices. To compile these estimates, the Perpetual Inventory Method is applied, which – if applied properly – should replicate the Net Present Value of future capital services derived from the asset in question.

10 In the case of fixed assets for which active second-hand markets exist, such as the ones for generic transport equipment and dwellings, it can be assumed that the value derived from the capital services approach will closely follow the market prices of the relevant second-hand assets, as the relevant economic agents can make an explicit choice between investing in new assets, or purchasing second-hand assets. 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 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.

11 Similar valuation issues may exist in the case of, for example, natural resources, which are not traded in the market, but for which exploitation rights are provided by government for a series of rent payments. These actual rent payments may not account for the full resource rent that can be derived from these assets. If the rights are not transferable, one could argue that the market price of the rights is zero, although the asset in question generates a future stream of resource rent for the exploiter owning these rights, basically

reflecting the future capital services. The latter may thus represent a more appropriate reflection of the economic value of such assets.[1]

12 Although not yet discussed in full detail, there seems to be quite some sympathy for the above considerations, with the exception of one participant who basically states, first and foremost in the case of natural resources, that only observed values should be accounted for.

Valuation of ecosystem assets

13 Although not directly relevant for the SNA per se, questions have also been raised on the valuation of ecosystem services and ecosystem assets. When looking at ecosystem services, a considerable part of these services involves an extension of the current SNA production boundary, similar to e.g., unpaid household services. An important, and – as the author of this GN sees it – logical consequence of this extended production boundary is that it can/will also lead to an extension of the asset boundary, by including non-SNA benefits into the valuation of ecosystem assets.

14. Again, time constraints did not allow for an in-depth discussion, but participants generally seem to agree with the above considerations, provided that appropriate valuation methodologies, consistent with the valuation principles of the SNA, are applied. In addition, however, it was noted that ecosystem services may be different from unpaid household services, in the sense that the former cannot always be separated easily, and that they lack exclusivity in their use.

Rate of return to invested capital and discount rate

15 The 2008 SNA hardly contains any guidance on the use of the rate of return to invested capital and the discount rate. Currently, the 2008 SNA only includes the following:

- Regarding the return on capital, paragraph 6.245 of the 2008 SNA is one of the few paragraphs that provides some (implicit) guidance, in this case related to the measurement of consumption of fixed capital and rentals of fixed assets: "… *interest costs may consist either of actual interest paid on borrowed funds or the loss of interest incurred as a result of investing own funds in the purchase of the fixed asset instead of a financial asset".* Furthermore, when discussing capital services, it keeps an open position towards the use of an exogenous versus an endogenous rate of return. Given its use in valuation methodologies for positions, for example in the case of natural resources using the Net Present Value of future resource rents, the use of an exogenous rate seems to be the only viable option. But the question is which rate of return to apply? Including/excluding a risk premium, to account for the risks related to certain activities?
- Discount rate: Again, as noted in the case of the rate of return to capital, the 2008 SNA hardly says anything about the discount rate to be applied, although discounting future

[1] Please note that this issue has a clear link with the discussion on the split-asset approach, which is currently still under investigation.

benefits/costs is quite often recommended for valuing positions. When applied, the 2008 SNA uses, in their examples, a fixed discount rate of 5%.

16 It has already been proposed, in Guidance Note WS.10 on Valuation of mineral and energy resources, to include more explicit guidance on the application of the Net Present Value methodologies, including the use of discount rates. Moreover, quite some guidance is provided in the SEEA Central Framework and related material. This guidance needs to be further exploited to arrive at more concrete guidance, possibly in the form of a separate issues note.

Criteria for assessing the adequacy of valuation methodologies

17 The GN provides, in Section 3, a list of criteria to assess the various valuation methodologies. The starting point for these criteria is the list developed in Guidance Note D.2 on “Valuation of unlisted equity in direct investment”. However, some modifications have been introduced, mainly because of the much broader application of these criteria, going well beyond the valuation of unlisted equity.

18 Before and at the meeting of the Task Team, participants suggested to add the following criteria, eventually to be combined with the criteria already proposed in the GN:

- conceptual and/or methodological soundness, although some participants argued that this criterion may need to be defined more narrowly;
- accuracy, or perhaps preferably, fit for purpose; and
- replicability of the methodology.

Other points raised

19 Task Team members also raised a number of other issues for consideration, as follows:

- As the same valuations that underpin the SNA also underpin other economic statistics frameworks, such as the BPM, engagement with the custodians of these frameworks – particularly the IMF Balance of Payments team – will be necessary as this GN continues to develop.
- A shorter version of the GN, in addition to the current version, would be very much welcomed, if only for communication purposes.
- There may be a need for broadening the motivation for the GN, i.e., what were the main reasons for having a renewed in-depth discussion on valuation principles and methodologies.
- It would be good to make a clearer distinction between market and non-market transactions.
- More guidance may be needed on the indirect valuation of positions and the interpretation of implausible results such as negative equity.

Requests to the AEG

20 The AEG is kindly requested:

- to provide feedback on the points raised in this cover-note; and
- to provide more detailed written comments and suggestions after the meeting.