



2008 SNA - Main Changes from 1993 SNA

Seminar on developing the capacity to produce economic statistics, including national accounts in accordance with the 2008 SNA, in the Asian and Pacific region

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Outline of Presentation

- ▶ Changes from the 1993 SNA
 - ▶ Annex 3 of 2008 SNA (pages 581-602)
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- ▶ 2008 SNA Changes affecting GDP

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Changes from the 1993 SNA

Changes from 1993 SNA may be grouped as follows:

1. Further specifications of statistical units and revisions in institutional sectoring
2. Further specifications of scope of transactions including the production boundary
3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)
4. Further refinement of treatment and definition of financial instruments and assets
5. Further specifications of the scope of transactions concerning government and public sector
6. Harmonization between concepts and classifications of SNA and BPM6

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1. Further specifications of statistical units and revisions in institutional sectoring

Producer unit undertaking ancillary activities to be recognized as a separate establishment in certain cases (para 5.41-5.42)

- ▶ Unit undertaking purely ancillary activities to be recognised as separate establishment if:
 - statistically observable, in that separate accounts for the production it undertakes are readily available, or
 - if it is located in a geographically different location from the establishments it serves
- ▶ The ancillary establishment classified according to its own principal activity
- ▶ The value of output should be derived on a sum of costs basis, including the costs of the capital used by the unit
- ▶ The 1993 SNA treated a producer unit undertaking purely ancillary activities always as an integral part of the establishment it served

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1. Further specifications of statistical units and revisions in institutional sectoring

Holding company (para 4.54)

- ▶ **Holding company allocated to the financial corporations sector**
- ▶ As described in section K class 6420 of the ISIC Rev. 4, a holding company holds the assets of subsidiary corporations but does not undertake any management activities. Such a unit therefore, **produces only a financial service**
- ▶ In the 1993 SNA the holding companies were recommended to be assigned to the institutional sector in which the main activity of the group of subsidiaries is concentrated

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1. Further specifications of statistical units and revisions in institutional sectoring

Head office (para 4.53)

- ▶ Head office to be allocated to the institutional sector preponderant to activity of its subsidiaries
- ▶ The activities of a head office, as defined in section M class 7010 of the ISIC Rev. 4, includes
 - Overseeing and managing of other units of enterprise
 - Undertaking the strategic or organizational planning and decision making role of the enterprise
 - Exercising operational control and manage the day-to-day operations of their related units
 - Such a unit therefore, produces the non-financial or financial services depending upon the nature of production of its subsidiaries
- ▶ The 2008 SNA therefore, recommends that the head office should be allocated to the
 - non-financial corporations sector unless
 - all or most of its subsidiaries are financial corporations, in which case it is treated by convention as a financial auxiliary in the financial corporations sector
- ▶ 1993 SNA did not give explicit guidance for treatment of head offices

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1. Further specifications of statistical units and revisions in institutional sectoring

Sub-sectoring of the financial corporations sector revised (para 4.98-4.116)

- ▶ 9 sub-sectors to reflect new developments in financial services, markets and instrument
 - i. Central Bank (S121)
 - ii. Deposit-taking corporations except the central bank (S122),
 - iii. Money market funds (MMFs) (S123),
 - iv. Non-MMF investment funds (S124),
 - v. Other financial intermediaries except insurance corporations and pension funds (ICPFs) (S125),
 - vi. Financial auxiliaries (S126),
 - vii. Captive financial institutions and money lenders (S127),
 - viii. Insurance corporations (ICs) (S128) and
 - ix. Pension funds (PFs) (S129)

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1. Further specifications of statistical units and revisions in institutional sectoring

Informal sector – presented separately within households sector

- ▶ Growing importance of informal sector both in the developing and developed economies
- ▶ Separate chapter in the 2008 SNA (Chapter 25)
 - Exhaustive coverage of economic activities
 - Data needs for policy purposes

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1. Further specifications of statistical units and revisions in institutional sectoring

Definition of financial services enlarged (para 4.98, 6.158, 6.165)

- ▶ 1993 SNA recognised only financial intermediation services
- ▶ 2008 SNA enlarges definition of financial services to give due weight to the increase in financial services other than the financial intermediation, specifically financial risk management and liquidity transformation.
- ▶ Financial services provided by money lenders recognised
 - Includes services provided by unincorporated enterprises

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2. Further specifications of scope of transactions including the production boundary

Research and Development (para 6.207)

- ▶ Research and Development (R&D) is not treated as ancillary activity
- ▶ A separate establishment should be distinguished for it when possible.
- ▶ The 2008 SNA recommends that the output of the R&D should be valued at
 - market price if purchased (outsourced) or
 - sum of total production costs plus an appropriate mark-up representing costs of fixed assets used in production if undertaken on own account
- ▶ The 1993 SNA by convention treated the output of R&D as intermediate consumption

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2. Further specifications of scope of transactions including the production boundary

Method for calculating financial intermediation services indirectly measured (FISIM) is refined (para 6.163-6.165)

- ▶ By convention the 2008 SNA recommends that
 - FISIM applies only to loans and deposits and
 - only when those loans and deposits are provided by, or deposited with, financial institutions
- ▶ The 2008 SNA calculates the output of FISIM on loans (VL) and deposits (Vd) only, using a reference rate (rr)
- ▶ Assuming that these loans and deposits attract interest rates of rL and rd respectively, the output of FISIM should be calculated as $(rL - rr) VL + (rr - rd) Vd$

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2. Further specifications of scope of transactions including the production boundary

Method for calculating financial intermediation services indirectly measured (FISIM) is refined (para 6.163-6.165)

- ▶ The 2008 SNA recommends that consumption of FISIM should be allocated between users (lenders and borrowers) treating the allocated amount either as intermediate consumption or final consumption or exports
- ▶ The 1993 SNA
 - calculated FISIM as the difference between property income receivable and interest payable
 - excluded from property income receivable that part which was earned using investment of own funds
 - accepted that some countries may prefer to continue to use the convention whereby the whole of FISIM is allocated to intermediate consumption of a notional industry

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2. Further specifications of scope of transactions including the production boundary

Output of central bank clarified (para 6.151-6.156)

- ▶ Services produced by the central bank are identified in three broad groups
 - financial intermediation,
 - monetary policy services, and
 - supervisory services - overseeing financial corporations
- ▶ Separate establishments should be identified for units of the central bank undertaking production of these services
- ▶ Financial intermediation services represent market production
- ▶ Monetary policy services represent non-market production and
- ▶ Borderline cases, such as supervisory services may be treated as market or non-market services depending on whether explicit fees are charged that are sufficient to cover the costs of providing such services
- ▶ 1993 SNA recommended that the services of central bank be measured on basis of receipts from fees, commissions, and FISIM
 - Resulted in unusually large positive or negative output

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2. Further specifications of scope of transactions including the production boundary

Recording of output of Non-life insurance services Improved (para 6.184-6.190, 6.199, 17.13-17.42)

- ▶ Catastrophic events generate massive claims on non-life insurance companies
- ▶ In such cases the output of the insurance activity estimated using the basic algorithm of the 1993 SNA anchored on the *balance of premiums and claims* (on accrual basis) could be extremely volatile (even negative)
- ▶ The 2008 SNA, therefore recommends that the output of the non-life insurance activity should be calculated using the *adjusted claims* and *adjusted premiums supplements*
 - Net premiums receivable and actual claims may no longer be equal for each period

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2. Further specifications of scope of transactions including the production boundary

Recording of output of Non-life insurance services Improved (para 6.184-6.190, 17.13-17.42)

- ▶ 3 methods to compute non-life insurance output
 - Expectations approach
 - Accounting approach
 - Cost approach
- ▶ Expectations approach
 - Ex-ante model
 - Insurers consider expectation of claims and premium supplements in setting premiums
 - Expected margin (premiums + expected premium supplements – expected claims) provides better measure of output than 1993 SNA ex-post formula

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2. Further specifications of scope of transactions including the production boundary

Recording of output of Non-life insurance services Improved (para 6.184-6.190, 17.13-17.42)

- ▶ Accounting approach
 - Output = actual premiums earned + premium supplements – adjusted claims incurred
 - Adjusted claims incurred determined by using claims due plus changes in equalisation provisions and, if necessary, changes to own funds
- ▶ Cost approach
 - Use if data are not available to apply the expectations and accounting approaches
 - Output is estimated as sum of costs (including intermediate costs, labour and capital inputs) plus allowance for “normal profit”

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2. Further specifications of scope of transactions including the production boundary

Valuation of output for own final use by households and corporations to include a return to capital (para 6.125)

- ▶ Return to capital to be included as part of the sum of costs for valuation of the output of goods and services produced for own final use by households and corporations
- ▶ No return to capital to be included when production for own final use is undertaken by non-market producers
- ▶ 1993 SNA was not explicit in including the return to capital in estimating the output of goods and services produced for own final use by households and corporations

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Change of economic ownership introduced (para 3.21, 3.26, 3.169, 10.5)

- ▶ 2008 SNA gives guidance to distinguish between legal ownership and economic ownership
- ▶ The unit entitled to the benefits in exchange from assuming the risk of the asset in case of damage, destruction and theft etc is the economic owner
- ▶ 1993 SNA did not explicitly define ownership

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Asset boundary extended to include R&D (para 10.103-10.105)

- ▶ The output of the R&D is capitalized as “intellectual property products”
 - except in cases where it is clear that the activity does not entail any economic benefit to its producer (and hence owner) in which case it is treated as intermediate consumption.
- ▶ Patented entities, of the 1993 SNA asset category is no longer separately identified and is subsumed into R&D assets
- ▶ Treatment of R&D giving rise to produced assets has removed the 1993 SNA inconsistency of treating the patented entities as non-produced asset but treating royalty payments as payments for services

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Extension of the assets boundary and government GCF to include expenditure on weapon systems (para 10.87, 10.144)

- ▶ Military weapon systems are seen to be used continuously in the production of defence services, even if their peacetime use is simply to provide deterrence
- ▶ The 2008 SNA, therefore, recommends that military weapon systems should be classified as fixed assets
 - Single-use items, such as ammunition, missiles, rockets, bombs, etc., delivered by weapons or weapons systems are treated as military inventories
- ▶ The 1993 SNA treated as gross fixed capital formation all expenditures by the military on fixed assets of a kind that could be used for civilian purposes of production
 - military weapons, and vehicles and equipment whose sole purpose was to launch or deliver such weapons, were not treated as gross fixed capital formation but as intermediate consumption

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Asset category "computer software" modified to include databases (para 10.110-10.114)

- ▶ 1993 SNA asset category "computer software" modified in 2008 SNA to "computer software and databases"
- ▶ 2008 SNA provides explicit guidance on valuation of computer software and databases purchased from market or developed in-house
 - Purchased from market – purchasers' prices
 - Developed in-house – basic price or sum of costs (including a return to capital for market producers)
- ▶ The 1993 SNA only recognized "large" databases as assets

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Revised classification of assets introduced (Chapter 10)

Produced assets

- ▶ Within buildings and structures, a category has been added for land improvements. This replaces the 1993 SNA term "major improvements to non-produced non-financial assets". The costs of ownership transfer on all land are to be included with land improvements.
- ▶ The information, computer and telecommunications (ICT) equipment has been included as a new category under machinery and equipment
- ▶ Weapon systems are recognized as produced assets and classified separately
- ▶ The term "intangible fixed assets" has been renamed as "intellectual property products". The word "products" is included to make clear that it does not include third party rights which are non-produced assets in the SNA

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Revised classification of assets introduced (Chapter 10)

Produced assets

- ▶ R&D products are included within intellectual property products
- ▶ The item "mineral exploration" has been renamed to "mineral exploration and evaluation" to emphasise that the coverage conforms to the international accounting standards
- ▶ Computer software has been modified to include databases
- ▶ The term "other intellectual property products" replaces "other intangible fixed assets"
- ▶ The only change to inventories is to show military inventories separately

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Revised classification of assets introduced (Chapter 10)

Non-Produced assets

- ▶ The "tangible non-produced assets" of the 1993 SNA are renamed as "natural resources"
- ▶ Other natural resources such as the radio spectrum has been added, and
- ▶ The "intangible non-produced assets" has been split into two sub-categories, namely, "contracts, leases and licences" and "goodwill and marketing assets"
- ▶ Contracts, leases and licences has been split into four sub-categories;
 - marketable operating leases,
 - permissions to use natural resources,
 - permissions to undertake specific activities, and
 - entitlement to future goods and services on an exclusive basis

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Mineral exploration and evaluation (para 10.106-108)

- ▶ The 2008 SNA maintains the distinction between the act of exploring for mineral resources (treated as a produced asset) and the mineral resources themselves (treated as non-produced assets)
- ▶ The term “mineral exploration” has been renamed as “mineral exploration and evaluation” to match the term used in the International Accounting Standards
- ▶ The 2008 SNA gives guidance that
 - mineral exploration and evaluation should be valued at market prices if purchased or
 - at the sum of costs plus an appropriate mark-up if undertaken on own account

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3. Extension and further specification of concept of assets, capital formation and consumption of fixed capital (CFC)

Land improvements (para 10.79-10.81)

- ▶ Land improvements continue to be treated as gross fixed capital formation
- ▶ The 2008 SNA recommends treating land improvements as a category of fixed assets distinct from the non-produced land asset as it existed before improvement
- ▶ In cases where it is not possible to separate the value of the land before improvement and the value of those improvements, the land should be allocated to the category that represents the greater part of the value
- ▶ The costs of ownership transfer on all land are to be included in the land improvements.
- ▶ The 1993 SNA recorded improvements to land as gross fixed capital formation, but in the balance sheet such improvements were included with land itself

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4. Further refinement of treatment and definition of financial instruments and assets

- ▶ To reflect the innovations in the financial market and also maintain its relevance in a time of rapid economic and institutional change the financial asset classification has been changed in the 2008 SNA (Chapter 11)
 - Monetary gold and SDRs
 - Monetary gold
 - SDRs
 - Currency and deposits
 - Currency
 - transferable deposits
 - Other deposits
 - Debt securities
 - Short-term
 - Long-term
 - Loans
 - Short-term
 - Long-term
 - Equity and investment fund shares
 - Equity (listed/unlisted/other shares)
 - Investment fund shares/units
 - Insurance, pension and standardised guarantee schemes
 - Non-life insurance technical provisions
 - Life insurance and annuity entitlements
 - Pension entitlements
 - Financial derivatives and employee stock options
 - Financial derivatives (options/forwards)
 - Employee stock options
 - Other accounts receivable/payable
 - Trade credits and advances
 - Other accounts receivable/payable

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4. Further refinement of treatment and definition of financial instruments and assets

Treatment of employee stock options (ESOs) described (para 11.125, 17.384-17.398)

- ▶ ESO – agreement made on a given date (grant date) under which an employee may purchase a given number of shares of the employer's stock at a stated price (strike price) either at a stated time (vesting date) or within a period of time (exercise period)
- ▶ 2008 SNA recommends that transactions in ESOs should be recorded in financial account as counterpart to compensation of employees represented by value of stock option
- ▶ 1993 SNA did not provide guidance on treatment of ESOs

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4. Further refinement of treatment and definition of financial instruments and assets

Treatment of non-performing loans elaborated (para 11.130, 13.66-13.68)

- ▶ Non-performing loan – loan on which payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons (such as a debtor filing for bankruptcy) to doubt that payments will be made in full

- ▶ 2008 SNA recommends that non-performing loans should continue to be recorded at nominal value in main accounts and interest should be shown accruing until a loan is repaid or principal is written off by mutual agreement

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4. Further refinement of treatment and definition of financial instruments and assets

Treatment of non-performing loans elaborated (para 11.130, 13.66-13.68)

- ▶ 2 memorandum items
 - Nominal value of loans deemed to be non-performing
 - Market equivalent value of these loans

- ▶ Interest receivable on non-performing loans should be shown as “of which” item

- ▶ 1993 SNA did not provide criteria to be applied to recording of non-performing loans

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4. Further refinement of treatment and definition of financial instruments and assets

Distinction between financial and operating leasing based on economic ownership (para 17.301-17.309)

- ▶ Distinction between financial leasing and operating leasing based on economic ownership
- ▶ The 2008 SNA recognises the distinction between the operating leasing and the financial leasing according to whether the lessee should be regarded as the economic owner of the asset or not
- ▶ The distinction between operating leasing and the financial leasing in the 1993 SNA was interpreted to be based on the length of the time of lease

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4. Further refinement of treatment and definition of financial instruments and assets

Changes in recording pension entitlements (para 17.116-17.206)

- ▶ The 2008 SNA recognizes that employment-related pension entitlements are contractual engagements, in that they are expected or likely to be enforceable and therefore, they should be recognized as households' assets, irrespective of the fact that segregated schemes' assets exist or not, and of the fact that the employer may have recorded an associated liability entry in the his balance sheet or not
- ▶ Consequently the 2008 SNA recommends recording of the liabilities of employment-related pension schemes, regardless of whether funding to meet them exists or not
- ▶ For pensions provided by government via social security however, countries have some flexibility to deviate from this rule in the set of standard tables.
 - This is because the division between which pensions are provided by social security and which by other employment-related schemes varies considerably from country to country
- ▶ However, the full range of information required for a comprehensive analysis of pensions is recommended to be provided in a supplementary table that shows the liabilities and associated flows of all private and government pension schemes, whether funded or unfunded and including social security

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5. Further specifications of the scope of transactions concerning government and public sector

Government and public sector (para 4.25, 4.77-4.80, Chapter 22)

- ▶ Recognising the fact that the powers, motivation and functions of government are different from those of other sectors of the economy and that it organises its operations through different institutional units, the 2008 SNA gives extra guidance for the distinction between general government and public corporations
- ▶ Treatment of restructuring agencies has been elaborated
- ▶ Principles for treatment of public-private partnership schemes outlined
- ▶ Guidance provided for recording of tax credits

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6. Harmonization between concepts and classifications of SNA and BPM6

Goods for processing (para 6.85-6.86, 14.37-14.42)

- ▶ Goods sent for processing should be recorded on strict change of ownership basis

Merchanting (para 14.73)

- ▶ purchase of a good by a resident (of the compiling economy) from a non-resident and the subsequent resale of the good to another non-resident, without the good entering the merchant's economy
- ▶ 2008 SNA provides guidelines for recording merchanting
 - Acquisition of goods – negative exports
 - Disposals of goods – positive exports

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2008 SNA Changes affecting GDP

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Capitalization of R&D

Capitalization of R&D

- ▶ The activity of R&D is no longer treated as ancillary
- ▶ Expenditure on R&D is treated as capital formation (except those made available free)

Impacts

- ▶ Move R&D from intermediate consumption to gross capital formation. This changes GDP by the same amount.
- ▶ Require adding consumption of R&D fixed capital stock to non-market output: increase GDP

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Output for own final use by households and corporations is valued with a return to capital

- ▶ Valuation of market producers only
- ▶ Not applicable to non-market producers like government and NPISH

Impacts

- ▶ Output valued by cost increases by an imputed value of return to capital (Need total stock of assets for the calculation of return to capital)
- ▶ GDP increases by the same amount of imputed value

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Capitalization of weapon systems

Military Expenditure

- ▶ Fixed assets (Transports and weapons delivery systems, inter-continental missiles, etc.)
- ▶ Change in inventories (bullets, bombs, etc.)

Impacts

- ▶ Move expenditure on military equipments from final consumption to gross capital formation: This does not change GDP
- ▶ Require adding consumption of military fixed capital stock to government output: increase GDP

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New way of measurement of FISIM

Measurement

- ▶ Measurement relies only on interest receivable on loans and interest payable on deposits, ignoring all other investment incomes
- ▶ Loans made from own funds are also treated as generating output
- ▶ FISIM to be allocated between users

Impacts

- ▶ Depending on the structure of financial instruments, output of FISIM could increase
- ▶ For example, loans made from own funds will increase FISIM
- ▶ Money lenders output recognized
- ▶ FISIM allocated to final demand and exports will increase GDP

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Unfunded pension funds

Imputation

- ▶ There is a cost to administering pension schemes, including non-autonomous and unfunded ones
- ▶ Output to be determined using sum of costs, consumed by employees holding the pension entitlements

Impacts

- ▶ Change household consumption
- ▶ Change GDP

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Treatment of ESOs

Treatment of employee stock options as compensation of employees (in kind)

- ▶ It is equal to the difference between the market price and strike price at the vesting date (only when positive)
- ▶ It should be spread between the grant date and the vesting date
- ▶ Treatment has been approved by International Accounting Standards (IAS) and the US Financial Accounting Standards Board (FASB)

Impacts

- ▶ Increase compensation of employees of corporations
- ▶ Reduce operating surplus of corporations
- ▶ Do not change GDP but change household income

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Thank you

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