EUROPEAN COMMISSION

EUROSTAT

Directorate C: National Accounts, Prices and Key Indicators

Manual on the Changes between ESA 95 and ESA 2010

The Manual on the Changes between ESA 95 and ESA 2010 sets out a description of the changes, the consequences for the national accounts and European accounts compiled in the European Union, and worked examples showing the effects of the changes. It provides Member States with the guidance necessary to compile data in a reliable and comparable way. The Manual is in line with Eurostat Working Party and Task Force conclusions and recommendations. It was approved by the Eurostat Group of Directors of Macroeconomic Statistics in November 2013.

Contents

Purpose of the Manual

European national accounts are produced by Member States in a comparable and reliable way, according to the current European System of Accounts (ESA). This is particularly important for measures of the economy which have a key role to play in the economic and fiscal policy of the European Union. An example is the measurement of Gross National Income, which sets a ceiling on the overall budget of the EU, and determines to a large extent the budget contributions of each Member State. Also key is the measurement of GDP and its components, given its role in providing a measure of domestic economic activity against which the financial health of the Member State's economy can be judged through ratios such as government deficit as a percentage of GDP, and government debt as a percentage of GDP.

Experience has shown that worked numerical examples of changes when the ESA is updated are very useful to the Member State producers of national accounts. Setting out how these changes affect the various accounts and balance sheets in the national accounts, helps Member States introduce the changes in a consistent manner. The changes are described in the following terms:

1. Description of the change, with references to ESA 95 and ESA 2010

2. Consequences of the change in terms of estimates

3. A numerical example, including how the accounting entries change by setting out the relevant national accounts tables.

4. A set of accounts

The starting point for the changes introduced to update ESA 95 to ESA 2010 was the list of 44 issues and 29 clarifications which provided the basis for changes to the SNA 1993 to produce the new SNA 2008. Brief details of these issues are set out in Annex 1, together with an indication of whether they have introduced changes which merit inclusion in this manual. Also included are changes which are specific to Europe such as the treatment of small tools, and the transfer of VAT own resource to the Institutions of the European Union from Member States.

As GDP and GNI levels are particularly important aggregate economic measures for Member States and the pursuit of economic policy in the European Union, a summary table is given showing which of the changes affect GNI and GDP, together with the output, expenditure and income components of GDP.

Some issues that are new relative to the last published manual ESA 95 have in fact been implemented in some Member States following specific guidance or recommendations. They are included in this manual for completeness. They are employee stock options, super dividends, and payable tax credits.

Table 1 (part one) Impact of changes ESA 95 to ESA 2010 on GNI Questionnaire (ESA 2010 codes)

Production approach		**1a**	**1b**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
P.1	Output of goods and services	**+**	**0/+**	**+**	**X**	**-/+**	**X**	**X**					**0/+**
P.2	Intermediate consumption				**X**	**-/0**			**X**			**-**	
B.1g	Gross value added	**+**	**0/+**	**+**	**X**	**0/+**	**X**	**X**	**X**			**+**	**0/+**
D.21	Taxes on products												
D.31	Subsidies on products												
Expenditure approach													
P.3 (S15)	Household final consumption expenditure			**+**	**X**							**+**	
P.3 (S14)	NPISH final consumption expenditure		**-/+**		**X**		**X**					**+**	**-/+**
P.3 (S13)	General government final consumption expenditure		**-/+**		**X**	**-/+**	**X**	**X**				**+**	**-/+**
P.5	Gross capital formation	**+**	**+/0**	**+**		**+/0**			**X**				**+/0**
P.51g	Gross fixed capital formation	**+**	**+/0**	**+**		**+/0**			**X**				**+/0**
P.52	Changes in inventories												
P.53	Acquisition less disposals of valuables												
P.61	Exports of goods												
P.62	Exports of services				**X**							**+**	
P.71	Imports of goods												
P.72	Imports of services				**X**								
Income approach													
D.1	Compensation of employees												
B.2g/B.3g	Gross operating surplus/mixed income	**+**	**0/+**	**+**	**X**	**0/+**	**X**	**X**	**X**			**+**	**0/+**
D.2	Taxes on production and imports												
D.3	Subsidies												
B.1g	Gross Domestic Product (GDP)	**+**	**0/+**	**+**	**X**	**0/+**	**X**	**X**	**X**			**+**	**0/+**
D.1	Compensation of employees received from RoW												
D.1	Compensation of employees paid to RoW												
D.2	Taxes on production and imports paid to institutions of the EU									**-**			
D.3	Subsidies received from the institutions of the EU												
D.4	Property income received from RoW										**X**		
D.4	Property income paid to RoW										**X**		
B.5g	Gross National Income (GNI)	**+**	**0/+**	**+**	**X**	**0/+**	**X**	**X**	**X**	**+**	**X**	**+**	**0/+**

(+) positive impact (-) negative impact (X) impact can go either way (0) no impact

Notes to the table on changes

Columns 1b and 4: the first sign shows the impact in year of acquisition; the second sign shows the impact in subsequent years.

Columns 1a and 1b: the signs correspond to the case where R&D is produced on own account.

N.B. The codes in the accounts of the numerical examples are those of ESA 2010.

List of conceptual issues (part 1) Changes which impact GNI

1. **Research and Development recognised as capital formation**
   - **1a R&D created by a market producer**
   - **1b R&D created by a non-market producer**
2. **Valuation of output for own final use for market producers**
3. **Non-life insurance – Output, claims due to catastrophes, and reinsurance**
4. **Weapon systems in government recognised as capital assets**
5. **Decommissioning costs for large capital assets**
6. **Government, public and private sector classification**
7. **Small tools**
8. **VAT-based third EU own resource**
9. **Index-linked debt instruments**
10. **Central Bank – allocation of output**
11. **Land improvements recognised as a separate asset**

Table 1 (part two) Impact of changes ESA 95 to ESA 2010 on GNI Questionnaire (ESA 2010 codes)

Production approach		**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
P.1	Output of goods and services													**X**	**-**
P.2	Intermediate consumption													**X**	**-**
B.1g	Gross value added													**X**	**X**
D.21	Taxes on products														
D.31	Subsidies on products														
Expenditure approach															
P.3 (S15)	Household final consumption expenditure														
P.3 (S14)	NPISH final consumption expenditure														
P.3 (S13)	General government final consumption expenditure														
P.5	Gross capital formation														
P.51g	Gross fixed capital formation														
P.52	Changes in inventories														
P.53	Acquisition less disposals of valuables														
P.61	Exports of goods									**-**	**+**				
P.62	Exports of services									**+**	**-**			**X**	**-**
P.71	Imports of goods									**-**					
P.72	Imports of services									**+**				**X**	**-**
Income approach															
D.1	Compensation of employees													**X**	
B.2g/B.3g	Gross operating surplus/mixed income													**X**	
D.2	Taxes on production and imports								**X**						
D.3	Subsidies								**X**						
B.1g	Gross Domestic Product (GDP)								**0**					**X**	**X**
D.1	Compensation of employees received from RoW													**X**	
D.1	Compensation of employees paid to RoW													**X**	
D.2	Taxes on production and imports paid to institutions of the EU														
D.3	Subsidies received from the institutions of the EU														
D.4	Property income received from RoW													**X**	**X**
D.4	Property income paid to RoW													**X**	**X**
B.5g	Gross National Income (GNI)								**0**	**0**	**0**			**0**	**0**

List of conceptual issues (part 2) not affecting GNI

12. **Employee stock options (ESOs)**
13. **Super dividends**
14. **Special Purpose Entities abroad and government borrowing**
15. **Head offices and holding companies**
16. **Sub-sectors of the financial corporations sector (S.12)**
17. **Guarantees**
18. **Special Drawing Rights (SDRs) of the IMF as assets and liabilities**
19. **Payable tax credits**
20. **Goods sent abroad for processing**
21. **Merchanting**
22. **Employers' pension schemes**
23. **Fees payable on securities lending and gold loans**
24. **Construction activities abroad**
25. **FISIM between resident and non-resident financial institutions**

1. Research and development recognised as capital formation

References:

	ESA 95	ESA 2010
Research and development	3.64, 3.70e4, 3.105b	3.82 – 3.83; 3.127

Description of the change

1.1 In ESA 95, there was recognition of some so-called intangible assets, some of them as (produced) fixed (AN.112) and others as non-produced assets (AN.22). The (produced) intangible fixed assets come under the new heading of intellectual property products in ESA 2010. ESA 95 recognised as intangible fixed assets the following: mineral exploration (AN.1121); computer software (AN.1122); entertainment, literary and artistic originals (AN.1123) and other intangible fixed assets (AN. 1129). ESA 2010 continued the expansion of the asset boundary by including results of research and development as intellectual property under the heading of produced assets. Patented entities are part of non-produced intangible assets in ESA 95 (AN.221), according to how they are described as non-produced intangible assets in SNA 1993. They are mentioned in ESA 95 paragraph 7.19 and defined in annex 7.1. Patented entries previously included there will be recognised as the output of the R&D activity and included under the new heading of intellectual property products, although the patent as such (the protection) is not produced but a "construct of society" and "evidenced by legal accounting actions" as defined in annex 7.1 of ESA 95.

1.2 ESA 2010 recognises expenditures for both purchased and own-account R&D as fixed investment and the depreciation of these assets as consumption of fixed capital. This includes government R&D expenditure either protected via patents or made freely available to the public. Not only is there a change in concept leading to a significant change in important economic measures, the newly recognised output and assets are also particularly difficult to measure. In theory, the value of the output of R&D is equal to the value of discounted future benefits a corporation gets from their R&D investment. These future benefits are difficult to estimate. Furthermore, most R&D is produced on own-account. Therefore the sum of cost approach for valuation of output will usually be applied.

Consequences of the change

1.3 Extending the asset boundary through the recognition of more produced fixed assets will affect important figures throughout the national accounts. Under ESA 95 own-account R&D was usually treated as ancillary activity to the main production of an enterprise. Under ESA 2010 the R&D activity is recognised as output in its own right. This output consists of intellectual property products, which are recognised as assets, which are used up gradually over their economic life. However, no allowance is made for the using up of assets over their life-span in gross measures derived from the national accounts, and so key measures of the level of economic activity such as GDP, GNI and GNDI as well as GFCF will be higher under ESA 2010 than ESA 95.

1.4 When the R&D is not conducted in-house and used in-house, but produced by a specialist free-standing R&D unit and the intellectual property is sold on to a customer, then the price of this

transaction will determine the value of the output of the R&D unit, and the value of the capital asset acquired by the customer. This is no different from the usual treatment of the production and acquisition of produced fixed assets. However, if the R&D output is sold to be used solely in the creation of further products of research and development, then by convention the R&D output will be recorded as intermediate consumption on acquisition by the customer. The assumption is that the bought-in R&D will be embedded in the final R&D product, and so the value is captured there rather than as a separate asset. This avoids double counting of the bought-in R&D, once as an asset in its own right, and then again when it is embedded in the final R&D product.

1.5 In ESA 2010, the impact of capitalisation of R&D on the accounts is different for a market producer from a non-market producer.

a.1 R&D produced on own account by a market producer:

> In the production approach, the output increases as an output for own final use (P.12) is identified and value added increases by the amount of R&D costs and mark-up.
>
> In the expenditure approach, gross fixed capital formation increases by the amount of R&D costs and mark-up.
>
> In the income approach, gross operating surplus or mixed income increase by the amount of R&D costs and mark-up.
>
> As a consequence, GDP and GNI increase.

a.2 A market producer purchases R&D:

> The purchases are reclassified from intermediate consumption (ESA 95) to gross fixed capital formation (ESA 2010).
>
> As a consequence, GDP and GNI increase in ESA 2010.

b.1 R&D produced for own account by a non-market producer:

> In the production approach, the total output as measured by the sum of costs remains the same in the year of the performance of the R&D. R&D expenditure produced on own-account was, under ESA 95, included in the costs and therefore registered as part of non-market output (P.13) and final consumption expenditure (P.3). In ESA 2010, R&D activities are registered as output for own final use (P.12) and the corresponding expenditure as investment (P.51). Therefore, non-market output (P.13) and final consumption expenditure of the non-market producer drop. But total output (P.1) is unchanged, so is value added. In the succeeding years of economic life of the R&D asset, the costs are increased by the amount of consumption of fixed capital in each year (extra consumption of fixed capital), until the asset value is exhausted. So over time, output and value added are increased by the amount of CFC due to the R&D product.

In the expenditure approach, in the year of creation, final consumption expenditure (P.3) drops by the amount allocated to GFCF representing the creation of the R&D product, and so total expenditure is unaltered in this year. So, R&D expenditure will be reclassified from consumption expenditure to GFCF. In succeeding years, final consumption expenditure increases by the amount of CFC due to the R&D product. The additional CFC will be recorded in consumption expenditures.

In the income approach, the gross operating surplus or mixed income increases by the amount of consumption of fixed capital due to the R&D product in the years following the year of creation, until the value of the asset is exhausted.

To sum up, GDP and GNI increase by the amount of the consumption of fixed capital of the capitalized R&D, in the years following the investment. NDP remains unchanged.

b.2 R&D purchased by a non-market producer:

Under ESA 95, this purchase was registered as intermediate consumption (P.2) and consequently under non-market output (P.13) and final consumption expenditure (P.3).

Under ESA 2010, the purchase is registered as an investment, so intermediate consumption (P.2) and non-market output (calculated as sum of costs) both decrease by the amount purchased.

Therefore, value added is unchanged (production approach).

The increase of GFCF is counterbalanced in the expenditure approach by a decrease of final consumption expenditure.

Assuming that the acquisition is made at the end of the year, there is no impact on GDP and GNI at the moment of acquisition, but in subsequent years the extra consumption of fixed capital on R&D gives rise to an increase of output (P.13) and final consumption expenditure; therefore, GDP and GNI increase by the amount of the consumption of fixed capital of capitalized R&D. NDP is unchanged.

Further methodological guidance on the recording of research and development in ESA2010 is provided in the "Manual on Measuring Research and Development in ESA 2010".

Numerical example for a market producer

1.6 A corporation has an output of 50m euros, and total inputs of materials and fuel of 20m euros, and services of 10m euros. Compensation of all employees is 15m euros and so operating surplus is 5 m euros. In one year, R&D is carried out within the corporation leading to the creation of intellectual property. For the R&D activity, part of materials and fuel used for this is 5m euros, services used is 5m euros and compensation of employees is 5m euros.

1.7 To calculate the output of R&D, we must sum the costs of undertaking R&D. They are materials (5) and services (5), compensation of employees (5) as well as a mark-up – assumed in this case to be a value of 1. So the output value of R&D is measured as 16.

Accounts

1995 ESA treatment m euros

Production account			
Uses		Resources	
Materials and fuel (P.2 part)	20	Output (P.11)	50
Services (P.2 part)	10		
Intermediate consumption (P.2)	30		
Value added (B.1g)	20		

Generation of income account			
	Uses	Resources	
Compensation of employees (D.1)	15	*Value added (B.1g)*	20
Operating surplus (B.2g)	5		

Allocation of income account			
	Uses	Resources	
		Operating surplus (B.2g)	5
Balance of primary			
incomes (B.5g)	5		

Secondary distribution of income account			
	Uses	Resources	
		Balance of primary	5
		incomes (B.5g)	
Disposable income (B.6g)	5		

Use of income accounts			
	Uses	Resources	
		Disposable income (B.6g)	5
Saving (B.8g)	5		

Capital account			
Changes in assets		Changes in liabilities and net worth	
		Saving (B.8g)	5
Net lending (B.9)	5		

1.8 The accounts above show the operating surplus of 5m euros feeding down from income of the corporation sector, to appear finally as net lending by this sector.

ESA 2010 treatment, recognising R&D as capital formation and valuing output of R&D at costs

Production account					
Uses	Main activity	R&D	Resources	Main activity	R&D
Materials (P.2 part)	15	5	Output (P.11)	50	
Services (P.2 part)	5	5	Output for own final use (P.12)		16
Intermediate consumption (P.2)	20	10			
Value added (B.1g)	30	6			

Generation of income account					
Uses	Main activity	R&D	Resources	Main activity	R&D
Compensation of employees (D.1)	10	5	*Value added (B.1g)*	30	6
Operating surplus (B.2g)	20	1			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	Main activity	R&D		Main activity	R&D
Capital formation (R&D) (P.51g)	16		*Saving (B.8g)*	20	1
Net lending (B.9)	4	1			

Combined accounts

Uses		Resources	
Materials and fuels (P.2 part)	20	output (P.11/P.16)	66
Services (P.2 part)	10		
Compensation of employees (D.1)	15		
Operating surplus (B.2g)	21		
Value added (B.1g)	36		

Combined Capital account

Uses		Resources	
R&D (P.51g)	16	Saving (B.8g)	21
Net lending (B.9)	5		

1.9 The example shows that output, value added and operating surplus have risen by 16. The extra operating surplus feeds down to be added to the saving of 5 previously carried on to the capital account so that there is an extra 16 to pay for the new capital formation of 16, and net lending remains unchanged at 5.

Numerical example for a non-market producer

1.10 Now consider the case where the producer is non-market – for example government. Then output is calculated as sum of costs, including capital consumption for assets held, but no mark-up.

Inputs of materials and fuel are 20m euros, and services of 10m euros. Compensation of all employees is 15m euros, and capital consumption of existing capital assets is 5. R&D is carried out as a one-off within government leading to the creation of intellectual property. For the R&D activity, the part of materials and fuel used for this is 5m euros, services used is 5m euros and compensation of employees is 5m euros.

1.11 Under ESA 95, output is sum of input costs and so output = 20 + 10 + 15 + 5 = 50.

ESA 95 treatment m euros

Production account			
Uses		Resources	
Materials and fuel (P.2 part)	20	Output (P.13)	50
Services (P.2 part)	10		
Intermediate consumption (P.2)	30		
Value added B.1g)	20		

Generation of income account			
	Uses	Resources	
Compensation of employees (D.1)	15	*Value added (B.1g)*	20
CFC (P.51c)	5		
Operating surplus, net (B.2n)	0		

Allocation of income account			
	Uses	Resources	
		Operating surplus, net (B.2n)	0
Balance of primary			
incomes, net (B.5n)	0		

Secondary distribution of income account			
	Uses	Resources	
		Balance of primary	0
		incomes, net (B.5n)	
		Net tax revenue (D.5)	50
Disposable income, net (B.6n)	50		

Use of income accounts			
	Uses	Resources	
Government final consumption (P.32)	50	*Disposable income, net (*B.6n)	50
Saving (B.8n)	0		

Capital account			
Changes in assets		Changes in liabilities and net worth	
CFC (P.51c)	-5	*Saving, net (B.8n)*	0
Net lending (B.9)	5		

1.12 ESA 2010 treatment, recognising R&D as capital formation

The output of R&D is sum of input costs, with no mark-up.

So R&D output = inputs of materials and services + compensation of employees + CFC for assets used in R&D performance. Assuming the existing capital assets plays no role in the performance of the R&D, we have

Output going to GFCF (sum of costs of R&D activity)	= 10 + 5 + 0 = 15
Output going to government final consumption (sum of costs of main activity)	= 20 + 10 + 5 = 35

In the year of R&D performance, ESA 2010 accounts are

Production account					
Uses			Resources		
	Main activity	R&D		Main activity	R&D
Materials (P.2 part)	15	5	Non-market output (P.13)	35	
Services (P.2 part)	5	5	Output for own final use (P.12)		15
Intermediate consumption (P.2)	20	10			
Value added (B.1g)	15	5			

Generation of income account					
Uses			Resources		
	Main activity	R&D		Main activity	R&D
Compensation of employees (D.1)	10	5	*Value added B.1g)*	15	5
CFC (P.51c)	5				
Operating surplus, net (B.2n)	0	0			

Allocation of income account					
Uses			Resources		
	Main activity	R&D		Main activity	R&D
			Operating surplus, net (B.2n)	0	0
Balance of primary					
income, net B.5n)	0	0			

Secondary distribution of income account					
Uses			Resources		
	Main activity	R&D		Main activity	R&D
			Balance of primary income, net (B5n)	0	0
			Tax revenue, net (D.5)	50	
Disposable income, net (B.6n)	50	0			
Use of income account					

Uses			Resources		
	Main activity	R&D		Main activity	R&D
Final consumption expenditure (P.32)	35	0	*Disposable income, net (B.6n)*	50	0
Saving, net (B.8n)	15	0			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	Main activity	R&D		Main activity	R&D
Capital formation (R&D) (P.51g)	0	15	*Saving, net (B.8n)*	15	0
Capital consumption (P.51c)	- 5	0			
Net lending (B.9)	20	-15			

Combined production and generation of income accounts, ESA 2010

Uses		Resources	
Materials and fuels (P.2 part)	20	output (P.12 / P.13)	50
Services (P.2 part)	10		
Compensation of employees (D.1)	15		
CFC (P.51c)	5		
Operating surplus, net (B.2n)	0		

Combined use of income account

Uses		Resources	
Final consumption expend (P.32)	35	*Disposable income net* (B.6n)	50
Saving, net (B.8n)	15		

Combined Capital account

Uses		Resources	
R&D capital formation (P.51g)	15	Saving (B.8n)	15
Capital consumption (P.51c)	-5		
Net lending (B.9)	5		

1.13 The example shows that total output (50), value added (20) and net lending (5) have remained the same under ESA 95 and ESA 2010 in the year of performance of the R&D. But the allocation of output to expenditure categories has changed – of the 50 that originally went to final consumption, 15 is now capital formation.

1.14 In subsequent years, the contribution of the extra CFC due to the use of the R&D capital asset will raise operating surplus and saving by a total of 15. Suppose that R&D expenditure (15) gives rise to a straight-line depreciation in the ten following years, GDP and GNI will increase by 1.5 in each of these 10 years; NDP and net lending will be unchanged and 1.5 will be recorded as extra consumption expenditure every year.

2. Valuation of output for own final use for market producers

References

	ESA 95	ESA 2010
Output for own final use	3.49	3.20, 3.45

Description of the change

2.1 The output produced for own final use consists of goods and services that are retained either for own final consumption or for capital formation by the same institutional unit. The ESA 2010 (3.45) and ESA 95 (3.49) state that output for own final use is to be valued at the basic prices of similar products sold on the market; this generates net operating surplus or mixed income for such output. An example is services of owner-occupied dwellings generating net operating surplus.

2.2 But, in cases where basic prices of similar products are not available, the output for own final use should be valued :

- at production costs (ESA 95 3.49)

- at production costs plus a mark-up (except for non-market producers) for net operating surplus or mixed income (ESA 2010 3.45).

Consequences of the change

2.3 The consequences will be small as, in most cases, the output for own final use for market producers is valued by reference to prices of similar products sold in the market.

But, in cases where the output has been valued in ESA 95 as the sum of costs without introducing a mark-up, the output measured in ESA 2010 which includes a mark-up for net operating surplus or mixed income, will be higher and this will increase the level of GDP.

2.4 In these cases, the changes in the accounts in ESA 2010, as compared to ESA 95, are the following:

a) In the production approach, output increases by the value of the mark-up and value added increases by the same amount;

b) In the expenditure approach, final consumption expenditure and/or capital formation increase by the value of the mark-up;

c) In the income approach, the gross operating surplus or mixed income increase by the value of the mark-up.

3. Non-life insurance - output, claims due to catastrophes, and reinsurance

References

	ESA 95	ESA 2010
Measurement of output	3.63; Annex III 39	3.74 and Chapter 16
Exceptional claim levels		4.165k and 16.92, 16.93

Description of the change for non-life insurance

3.1 There is more description in ESA 2010 of the calculation of insurance output, depending on the type of insurance e.g. non-life, and life. Under a non-life insurance policy, the insurance company accepts a premium from a client and holds it until a claim is made or the period of the insurance expires. In the meantime, the insurance company invests the premium, and the resulting property income is a source of extra funds from which to meet claims. The insurance company sets the premiums so that the sum of premiums plus property income less expected claims gives a margin which is the output for the insurance activity, and generates an acceptable return for shareholders.

3.2 The output of non-life insurance is calculated by:

Total premiums earned

plus premium supplements

less adjusted claims incurred.

3.3 ESA 2010 (3.74) says:

The appropriate level of claims used in calculating output is called "adjusted claims" and these can be determined in two ways. The expectation method estimates the level of adjusted claims from a model based on the past pattern of claims payable by the corporation. The second method uses accounting information: adjusted claims are derived ex post as actual claims incurred plus the change in equalisation provisions, i.e. the funds set aside to meet unexpectedly large claims. Where the equalisation provisions are insufficient to bring adjusted claims back to a normal level; contributions from own funds are added to the measure of adjusted claims. A major feature of both methods is that unexpectedly large claims do not lead to volatile and negative estimates of output.

If, due to lack of information, both methods for estimating adjusted claims are not possible, it may be necessary to estimate output instead by the sum of costs including an allowance for normal profits.

3.4 In ESA 95, the only output measure described is the simple one -

Premiums earned plus premium supplements less [unadjusted] *total claims due*

3.5 A second associated change is to consider the payment made for exceptional claims met after a catastrophe as a capital transfer. ESA 95 treated all claims as a current transfer. The labelling of the claims as capital transfers is because of the nature of the associated risk covered for the household and other sectors, which will be mostly major repairs and renovations to dwellings and other buildings, where the destruction will be recorded as other changes in volume of assets.

Description of the change for reinsurance

3.6 The output of reinsurance is also modified in ESA 2010 as compared to ESA 95. Transactions between insurance enterprises, in which an insurance enterprise undertaking insurance with policy holders transfers some of the risks incurred to other insurance enterprises, are called reinsurance.

In domestic reinsurance, the whole of the output of the reinsurer corresponds to the intermediate consumption of the direct insurer holding the reinsurance policy and so GDP is not affected. However, many reinsurance services are between insurers resident in different economies. When these cross-border services occur, the changes in the calculation of the service charged by re-insurers will modify the value of exports/imports of reinsurance services.

ESA 95 (Annex III paragraph 39) says that output of re-insurers is the balance of all transactions between re-insurers and insurance companies seeking re-insurance. So in simple terms:

ESA 95 output = premiums earned (net of commission payable) less claims incurred.

ESA 2010 says in paragraph 3.74c, that the output of reinsurance is determined in exactly the same way as direct non-life insurance, even if it is life insurance that is being reinsured.

ESA 2010 output = Premiums earned (net of commission payable) plus premium supplements less adjusted claims incurred.

As part of the calculation of adjusted claims, the change in insurance technical reserves (excluding holding gains/losses) will change GDP and GNI by the same amount.

3.7 Therefore, two changes are introduced in ESA 2010 concerning the reinsurance output:

- Actual claims are replaced by adjusted claims; and

- The output is increased by the introduction of premium supplements.

Consequences of the change for non-life insurance

3.8 The consequence of the change is that the non-life insurance service charge (output) is less volatile, and value added less likely to be negative under ESA 2010. Using the ESA 95 approach, in times of unusually large claims, the payments for the service charge by customers may be negative reflecting the large amount of money transferred as claims are made. In ESA 2010, the service charge calculated using adjusted claims ensures that the service charge remains representative of the activity of nonlife insurance over an extended period of time. The change from actual claims to

adjusted claims, keeping the measure of service charge positive, is matched by a transfer from the insurance corporations to households and other customers.

In the production approach, using adjusted claims rather than actual claims can increase or decrease the output. This will change the intermediate consumption of policy holders which use the policies in the act of further production. So overall value added will be modified only by the impact of insurance on domestic final consumption and exports.

In the expenditure approach, GDP is affected by the change in insurance final consumption and exports.

In the income approach, GDP is affected by the change in the gross operating surplus of insurers minus the change in the gross operating surplus of policy holders who have intermediate consumption of insurance output.

3.9 The counterpart of the change of the service charge is recorded in heading D.711 "net non-life direct insurance premiums" in which the service charge appears with a negative sign. This flow D.711 is a current transfer recorded in the *Secondary Distribution of Income* account, and so does not feature in the transition from GDP to GNI.

Consequently, GNI is also impacted by the introduction of adjusted claims in the calculation of insurance output. GNI will change by the same amount as GDP.

Consequences of the change for reinsurance

3.10 For domestic business, any change in the charges by reinsurers is reflected in the changes in intermediate consumption of the insurance companies, and so the effect on GDP and GNI is zero.

3.11 For reinsurance business across borders, the introduction of adjusted claims impacts GDP (and consequently GNI) because it implies a change in the level of exports of reinsurance services in the country of residence of the reinsurer and in the level of imports of reinsurance services in the country of residence of the direct insurer.

In the production approach, GDP is impacted by the changes of the output of exported reinsurance and of the intermediate consumption of imported reinsurance.

In the expenditure approach, GDP is impacted by the changes in exports and imports.

In the income approach, GDP is impacted by the change in the operating surplus of reinsurers and of insurers consuming reinsurance services.

3.12 The counterpart of the change of the service charge is recorded in heading D.712 "net non-life reinsurance premiums" in which the service charge appears with a negative sign. This flow D.712 is a current transfer which does not feature in the transition from GDP to GNI.

Consequently, as well as GDP, GNI is also affected by the introduction of adjusted claims in the calculation of reinsurance output. GNI will change by the same amount as GDP.

3. 13 For reinsurance business across borders, the inclusion of supplementary premiums arising from invested funds generates new cross-border flows. For a reinsurer abroad providing a service for a domestic insurance company, there will be an increase in payments for the service provided due to the inclusion of the premium supplements, and this will be directly compensated by a corresponding increase in the imputed flow of property income back to the insurance company (heading D.441 "investment income attributable to insurance policy holders"). There will be a corresponding change in financial transactions, reflecting the re-investment of the property income in the investment funds of the re-insurance company.

So the net effect of the activities of a non-resident re-insurer will be to decrease GDP in the country of residence of the insurance company seeking re-insurance, by recognising an increased charge for the reinsurance service. However, GNI will be unaffected as the increased service charge will have a corresponding imputed property income flow back the country of the insurance company.

Similarly for a country where there is re-insurance activity, where the net payments for re-insurance are in favour of the resident re-insurers, GDP under ESA 2010 will be higher by the amount of net service payments for reinsurance crossing the national border.

3.14 So the change due to including premium supplements in the measure of output can have either a positive or negative effect on GDP, depending on the net balance of re-insurance activity across national borders. There should in theory be no change to GNI, because of the compensating flows of income represented by the imputed income transfers from the investment fund of the re-insurers.

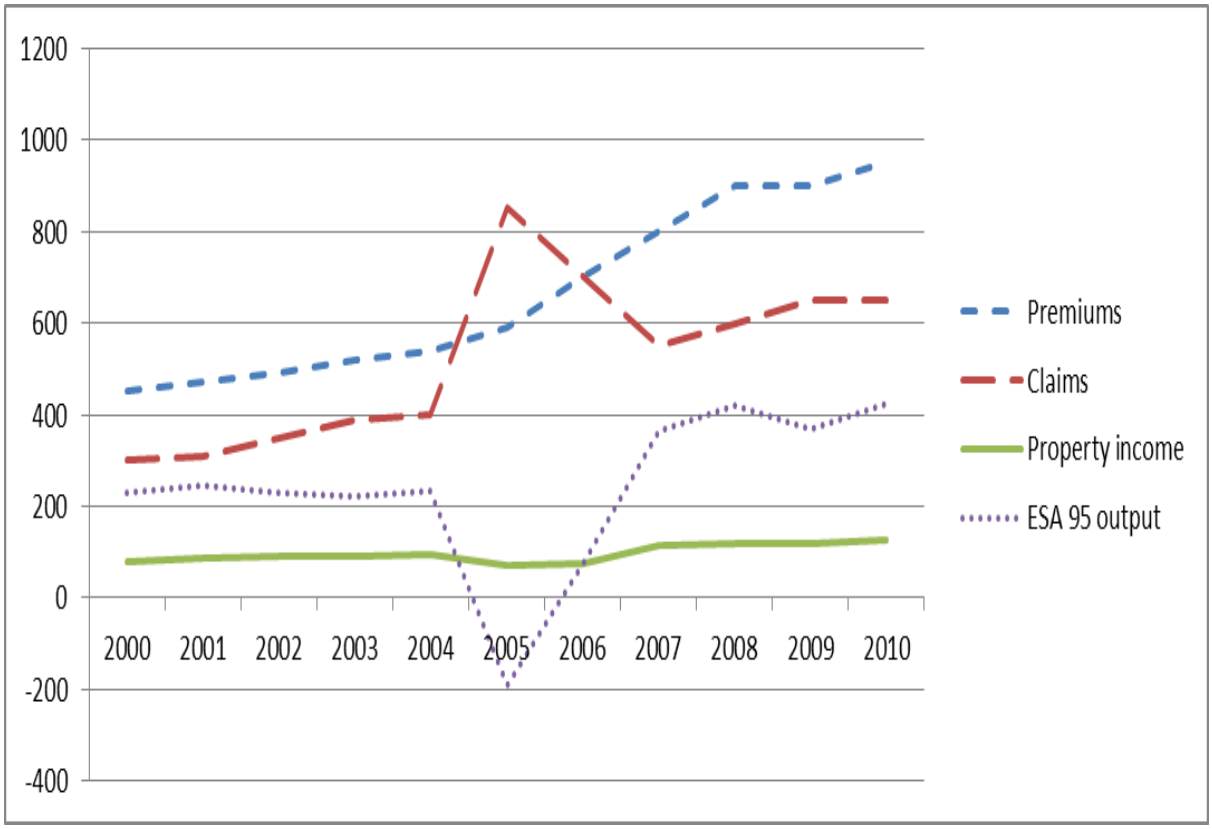
Numerical example

3.15 Consider an insurance company which is obliged to meet a high level of claims in one year. Table 3.1 below shows the behaviour over time of the associated premiums, claims, property income and the derived output using the ESA 95 measure of output (claims measured without adjustment).

Table 3.1 ESA 95 measure of output of non-life insurance

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Premiums	450	470	490	520	540	590	700	800	900	900	950
Claims	300	310	350	390	400	850	700	550	600	650	650
Property income	80	85	90	90	95	70	75	115	120	120	125
ESA 95 output	230	245	230	220	235	-190	75	365	420	370	425

Chart 3.1 ESA 95 measure of output of non-life insurance

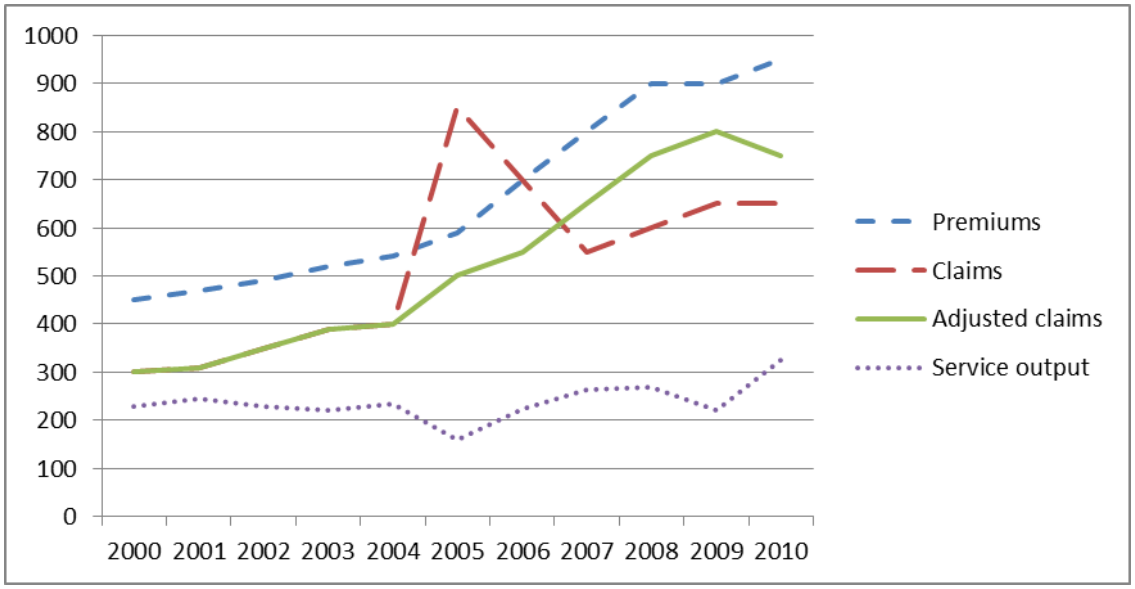


3.16 Under ESA 2010, information is obtained on changes in equalisation reserves, or reasonable assumptions are made, and adjustments are made to the raw claims figures so that the measure of insurance output is smoothed. These figures are shown in Table 3.2. Note that the adjustments sum to zero over the total period applied. This ensures that the smoothing effect does not change GDP levels summed over the whole period of adjustment, although the GDP of individual years is affected.

Table 3.2 ESA 2010 measure of output of non-life insurance

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Premiums	450	470	490	520	540	590	700	800	900	900	950
Adjusted claims	300	310	350	390	400	500	550	650	750	800	750
Property income	80	85	90	90	95	70	75	115	120	120	125
ESA 2010 output	230	245	230	220	235	160	225	265	270	220	325
Claim adjustments	0	0	0	0	0	-350	-150	100	150	150	100

Chart 3.2 ESA 2010 Measure of output of non-life insurance



Accounts

3.17 In the accounts, net premiums paid to the insurance companies are calculated as

Premiums earned + premium supplements less output

Under ESA 95, for 2005, this is 590+70-(-190) = 850. For ESA 2010, 590+70-160 = 500.

Claims are actual claims made = 850.

These flows are shown in the redistribution of income account.

Accounts for 2005 - ESA 95 and ESA 2010 sequence of accounts for the insurance corporations

Production account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Intermediate consumption (P.2)	40	40	Output (P.11)	-190	160
Value added (B.1g)	-230	120			

Generation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Compensation of employees (D.1)	50	50	*Value added (B.1g)*	-230	120
Operating surplus (B.2g)	-280	70			

Allocation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Operating surplus (B.2g)	-280	70
Premium supplements (D.441)	70	70			
Balance of primary					
incomes (B.5g)	-350	0			

Secondary distribution of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Bal. of primary incomes (B.5g)	-350	0
Net premiums (D.71)				850	500
Claims (D.72)	850	850			
Disposable income (B.6g)	-350	-350			

Use of income accounts					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Disposable income (B.6g)	-350	-350
Saving (B.8g)	-350	-350			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Saving (B.8g)	-350	-350
Net borrowing (B.9)	-350	-350			

Financial account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Net borrowing (B.9)	350	350

Accounts for 2005 - ESA 95 and ESA 2010 sequence of accounts for the household sector

Production account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Intermediate consumption (P.2)			Output (P.11)		
Value added (B.1g)					

Generation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Compensation of employees (D.1)			*Value added (B.1g)*	-	
Operating surplus (B.2g)					

Allocation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Compensation of employees (D.1)	50	50
Premium supplements (D.441)				70	70
Balance of primary incomes (B.5g)	120	120			

Secondary distribution of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Balance of primary incomes (B.5g)	120	120
Net premiums (D.71)	850	500			
Claims (D.72)				850	850
Disposable income (B.6g)	120	470			

Use of income accounts					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Disposable income (B.6g)	120	470
Insurance service (P.31)	-190	160			
Saving (B.8g)	310	310			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Saving (B.8g)	310	310
Net lending (B.9)	310	310			

Financial account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Net lending (B.9)	310	310

3.18 The difference between the borrowing requirement of the insurance corporation (350) and the surplus for lending for the Household sector (310) is the intermediate consumption of the insurance corporation (40), which is a resource for other industries rather than the household sector. In practice, the insurance corporations would raise the funds from their own reserves or from a variety of different lenders, not just the household sector.

3.19 ESA 2010 says in paragraph 16.66(d) that

Claims arising from catastrophic loss are other capital transfers (D.99) rather than current transfers, and they are recorded in the capital account as payable to policyholders by insurers.

3.20 Claims paid are classed as capital transfers when the claims paid as a result of a catastrophe are to make major repairs and renovate or rebuild property, which scores as capital formation in the accounts.

3.21 ESA 2010 says in paragraph 16.93 that

Following a catastrophe, the total value of the claims in excess of the premiums is recorded as a capital transfer from the insurer to the policyholder. Information on the level of claims to be met under insurance policies is obtained from the insurance industry. If the insurance industry cannot provide this information, one approach to estimating the level of the catastrophe-related claims is to take the difference between the adjusted claims and the actual claims in the period of the catastrophe.

3.22 In the numerical example below, two methods are compared (ESA 2010 recording):

a) All the claims are treated as current transfers (left columns);

b) The claims in excess to adjusted claims in year 2005 (850-500=350) are treated as capital transfers (right columns).

Household sector accounts ESA 2010

Secondary distribution of income account					
Uses	Case (a)	Case (b)	Resources	Case (a)	Case (b)
			Balance of primary incomes (B.5g)	120	120
Net premiums (D.71)	500	500			
Claims (D.72)				850	500
Disposable income (B.6g)	470	120			

Use of income accounts					
Uses	Case (a)	Case (b)	Resources	Case (a)	Case(b)
			Disposable income *(B.6g)*	470	120
Insurance service (P.31)	160	160			
Saving (B.8g)	310	- 40			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	Case (a)	Case (b)		Case (a)	Case (b)
			Saving (B.8g)	310	-40
Claims capital transfer (D.99)	0	350			
Net lending (B.9)	310	310			

3.23 The main change of showing the claims paid as a capital transfer, is to lower household disposable income, and lower household saving. Given the nature of the expenditure as a result of a catastrophe, this seems intuitively correct.

4 Weapon systems in government recognised as capital assets

References

	ESA 95	ESA 2010
Military weapons	3.70e, 3.108	3.129b, 20.190

Description of the change

4.1 In ESA 95, only the acquisition of those military structures and equipment which were considered to have a civilian equivalent were to be recorded as capital formation. Examples given were airfields, docks, roads and hospitals. In ESA 2010, the boundary of military capital assets is extended to include military weapons and supporting systems, even if they have no equivalent civilian purpose. Military weapons systems, comprising vehicles and other equipment such as warships, submarines, military aircrafts, tanks, missile carriers and launchers are fixed assets, used continuously for more than one year in the production of defence services. Single-use items, such as ammunition, missiles, rockets and bombs are treated as military inventories. This change has made the asset border for military goods consistent with the general definition of what constitutes capital assets – items of value lasting a long time which bring continuing future benefits to the economic owner.

Consequences of the change

4.2 The acquisition of military weapon systems was recorded as current expenditure (intermediate consumption) under ESA 95. So a very large purchase of aircraft would be recorded as intermediate consumption in the period of acquisition. This in turn would cause a large increase in government output, based on the sum of costs, for that period. It would however, leave value added unchanged.

4.3 Under ESA 2010, the acquisition is shown as capital formation, and its use over time would be represented as capital consumption. This will increase the measure of gross value added over the economic life of the assets.

4.4 In ESA 2010, as compared to ESA 95, the changes are the following :

a) in the year of acquisition

In the production approach, the intermediate consumption decreases because the weapon is now treated as capital formation; consequently, the government output, calculated as the sum of costs, decreases by the same amount. Therefore, the value added and GDP is unchanged.

In the expenditure approach, government final consumption expenditure decreases (by the same amount as output and intermediate consumption) but this decrease is counter balanced by the increase of gross fixed capital formation. GDP is unchanged.

In the income account, there is no change.

b) In the following years of the economic life of the asset

In the production account, government output calculated as the sum of costs increases because the consumption of fixed capital increases. GDP is increased by the amount of consumption of fixed capital.

In the expenditure approach, government final consumption expenditure increases by the same amount as output, by the amount of consumption of fixed capital.

In the income account, the gross operating surplus is increased by the same amount as value added. GDP is increased by the amount of consumption of fixed capital.

NDP and net lending/net borrowing remain unchanged.

Numerical example

4.5 Consider the acquisition of a weapon system for 100m euros in 2005. To keep the presentation simple, it is assumed that the acquisition occurs at the end of 2005. It is assumed that its economic life is 5 years, and that capital consumption occurs equally over the five years – that is at 20m euros per year. The following values stay steady over the time period considered.

Other government current spending on goods and services is 500m euros per year;
Compensation of employees is 500m euros a year;
Capital consumption for other assets is 50m euros per year;
Net tax revenue (taxes less benefits etc.) is 1000m euros per year

The change will show an increase in the cost of capital consumption of 20m in each of the succeeding years – from 2006 to 2010. These figures are shown in Table 4.1 and Table 4.2.

Table 4.1 ESA 95: Entries in the Production account for government

	2005	2006	2007	2008	2009	2010
Uses						
Materials (P.2 part)	300	200	200	200	200	200
Services (P.2 part)	300	300	300	300	300	300
Compensation of employees (D.1)	500	500	500	500	500	500
Capital consumption (P.51c)	50	50	50	50	50	50
Output (sum of costs) (P.13)	1150	1050	1050	1050	1050	1050
Gross value added (B.1g)	550	550	550	550	550	550

Table 4.2 ESA 2010: Entries in the Production account for government

	2005	2006	2007	2008	2009	2010
Uses						
Materials (P.2 part)	200	200	200	200	200	200
Services (P.2 part)	300	300	300	300	300	300
Compensation of employees (D.1)	500	500	500	500	500	500
Capital consumption (P.51c)	50	70	70	70	70	70
Output (sum of costs) (P.13)	1050	1070	1070	1070	1070	1070
Gross value added (B.1g)	550	570	570	570	570	570

4.6 It can be seen that the cumulative output (measured as sum of costs) over the whole period 2005 - 2010 is the same for ESA 95 and ESA 2010 at 6400 m euros. But gross value added has increased by the value of the capital consumption of the asset, spread over the years of the economic life of the weapon system. Gross value added does not increase in the year in which the capital asset is acquired.

Government accounts for 2005

Production account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Intermediate consumption (P.2)	600	500	Output (P.13)	1150	1050
Value added, gross (B.1g)	550	550			

Generation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Compensation of employees (D.1)	500	500	*Value added, gross (B.1g)*	550	550
Operating surplus, gross (B.2g)	50	50			

Allocation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Operating surplus, gross (B2.g)	50	50
Balance of primary					
incomes, gross (B.5g)	50	50			

Secondary distribution of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Balance of primary incomes, gross (B.5g)	50	50
			Net tax revenue (D.5)	1000	1000
Disposable income, gross (B.6g)	1050	1050			
Disposable income, net (B.6n)	1000	1000			

Use of income accounts					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Disposable income, gross (B.6g)	1050	1050
Final consumption expend (P.32)	1150	1050	*Disposable income, net*	1000	1000
Saving, gross (B.8g)	- 100	0	*(B.6n)*		
Saving, net (B.8n)	- 150	- 50			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
Weapon system (P.51g)	0	100	*Saving, net (B.8n)*	-150	-50
Capital consumption (P.51c)	-50	-50			
Net borrowing (B.9)	-100	- 100			

Financial account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Net borrowing (B.9)	-100	-100

Government accounts for 2006

Production account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Intermediate consumption (P.2)	500	500	Output (P.13)	1050	1070
Value added, gross (B.1g)	550	570			

Generation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Compensation of employees (D.1)	500	500	*Value added, gross (B.1g)*	550	570
Operating surplus, gross (B.2g)	50	70			

Allocation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Operating surplus, gross (B.2g)	50	70
Balance of primary					
incomes, gross (B.5g)	50	70			

Secondary distribution of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Balance of primary incomes, gross (B.5g)	50	70
			Net tax revenue (D.5)	1000	1000
Disposable income, gross (B.6g)	1050	1070			
Disposable income, net (B.6n)	1000	1000			

Use of income accounts					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Disposable income, gross (B.6g)	1050	1070
Final consumption expend (P.32)	1050	1070	*Disposable income, net (B.6n)*	1000	1000
Saving, gross (B.8g)	0	0			
Saving, net (B.8n)	- 50	- 70			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
Weapon system (P.51g)	0	0	*Saving, net (B.8n)*	-50	-70
Capital consumption (P.51c)	-50	-70			
Net lending/borrowing (B.9)	0	0			

Financial account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Net lending/borrowing (B.9)	0	0

5. Decommissioning costs for large capital assets

References

	ESA 95	ESA 2010
GFCF - Decommissioning costs	-	3.129h
Consumption of fixed capital – decommissioning costs	-	3.139

Description of the change

5.1 Decommissioning costs (also known as termination costs) are costs occurring at the end of an asset's life, required to decommission the asset in a manner aimed at ensuring there are no unwanted legacy costs such as environmental damage or safety concerns. Such termination costs are recorded, at the end of the asset's life, as gross fixed capital formation under costs of ownership transfer. In ESA 2010 the initial capital formation consists only of the asset value and ownership transfer costs recognised at acquisition (not the decommissioning cost). This initial capital formation is then depreciated over the economic life of the asset allowing for the decommissioning costs as well as the normal wear and tear and obsolescence of the asset. At the time of decommissioning, additional capital formation is then recorded to reflect the decommissioning costs. At the same time, these decommissioning costs are written off by consumption of fixed capital which matches the decommissioning which has been anticipated in the estimate of capital consumption observed during the life of the asset plus any remaining decommissioning costs not covered in this anticipated capital consumption. The consumption of fixed capital of the unanticipated decommissioning costs is shown in the year of decommissioning, whereas the consumption of fixed capital of anticipated decommissioning costs is included in the annual estimates of consumption of fixed capital over the life of the asset.

Consequences of the change

5.2 The possibility of very large decommissioning costs for capital assets such as nuclear power stations was not considered in ESA 95, and so no guidance was given beyond general guidance on how to treat costs of ownership transfer on the disposal of assets.

5.3 The way that decommissioning costs are distributed across time affects the distribution of consumption of fixed capital in the period. Through the distribution of consumption of fixed capital, the output of non-market producers calculated as sum of costs (production approach), the final consumption expenditure (expenditure approach), the operating surplus (income approach), and the GDP are slightly changed in profile, although the effect over the whole life time of the asset is neutral.

Numerical example

5.4 Consider a purchaser of a nuclear power station with a purchase cost of 200m euros, with an expected life of ten years, and decommissioning costs of 100m euros (unknown at the time of purchase).

Table 5.1 Decommissioning of large assets

	Year 0	Year 1	Year 2	Year 3	. . . . .	Year 9	Year 10	Total
Theory								
Purchase cost (P.51g)	200							
Decommission estimate (P.51g)	~~100~~						100	
Value of asset (AN.11)	200	170	140	110		-70	0	
Capital consumption (P.51c)		30	30	30		30	30	300
Practice								
Purchase cost (P.51g)	200							
Decommission cost (P.51g)							100	
Value of asset (AN.11)	200	180	160	140		20	0	
Capital consumption (P.51c)		20	20	20		20	120	300

5.5 In the table above, the theory case is as recommended in SNA 2008 and ESA 2010. However, in order to produce the estimates of 30 for the annual consumption of fixed capital over the life of the nuclear station, an assumption is required at the start of the period, regarding the termination costs. This assumed value of 100 must be added to the purchase price of 200 to obtain a starting basis of 300 for the calculations of consumption of fixed capital (300 reducing to 0 over ten years). A good estimate of the decommissioning costs is unlikely at the launch of the nuclear power station. So the second case (practice) above sets out a default option where, while still recognising the decommissioning costs as capital formation at the end of the ten years, their writing off by consumption of fixed capital takes place only in the same tenth year with no anticipated estimate of capital consumption over the previous years. This option may be all that is possible at present.

6. Government, public and private sector classification

References

	ESA 95	ESA 2010
Market, non-market output	3.16 – 3.45	1.37, 3.16 – 3.41, 20.05 - 20.55
Public versus private criterion	2.26	1.35, 20.309 - 20.320

Description of the change

6.1 Given the important policy requirement for accurate figures on government deficit and debt in Europe, and the experience of applying ESA 95 in determining reliable estimates, there is a significant increase in material on these issues in ESA 2010 over ESA 95. The changes include expanded guidance on the sector boundaries between government, public corporations, and private corporations. It was felt necessary under ESA 95 to introduce strict rules on how to decide whether a unit was operating mainly as a market or non-market institution.

Under ESA 95, an entity is classified to the general government sector if

a) It is not a separate institutional unit from government, or

b) It is a separate institutional unit controlled by government, and it is non-market.

Market output (ESA 95 paragraphs 3.17 and 3.18) is defined as output that is disposed of on the market, and sold at economically significant prices.

ESA 95 paragraph 3.19 states that "*output is only sold at economically significant prices when more than 50% of the production costs are covered by sales*."

6.2 In ESA 2010, the ability to undertake market activity will be checked notably through the usual quantitative criterion (the 50% criterion). However, in order to decide whether a producer that operates under the control of government is a market unit some qualitative criteria must also be taken into account. Compared with ESA 95, ESA 2010 therefore uses the qualitative properties of non-market producers as well.

Under ESA 2010, in order to decide whether an institutional unit producing under the control of government is market, the 50% criterion must be applied. If the ratio of sales to production costs is above 50%, the unit is in principle market. However, an assessment of its activity and resources remains necessary based on qualitative criteria. These qualitative criteria are as follows:

- When the unit sells only to government, and does not compete with private producers to obtain that this output is sold to government, then the unit is to be classified within general government; or

- When the government has a single supplier in a certain type of goods and services and this single supplier sells less than 50% of its output to non-government units and it did not compete with private producers to obtain its contract with the government, then the unit is to be classified within the general government; or

- When the producer has no incentive to adjust supply to undertake a viable profit-making activity, to be able to operate in market conditions and to meet its financial obligations, then the unit is to be classified within the general government.

6.3 For the market / non-market test, the 50% criterion–compares sales (paragraph 20.30) and production costs (paragraph 20.31). In this test, ESA 2010 includes, in production costs, the costs of capital which may in general be approximated by the net interest charge.

Consequences of the change

6.4 The inclusion of the net interest charge in the denominator of the ratio sales/production costs is likely to result in an increase in the number of units classified to the government sector, and with an associated change in recorded government deficit and debt. There is also likely to be a change in measures of value added, as public corporations with an operating loss or relatively small operating surplus compared to the size of the activity, will switch to having output valued as the sum of costs when they are reclassified to government. This will change the measure of value added and so GDP.

Numerical example

6.5 A consultancy firm controlled by government, providing services to government, after a tendering procedure, has the following incomes and expenditures.

	thousand euros
Revenue	325
Intermediate consumption of materials, fuels and services	100
Capital formation	50
Capital consumption	100
Compensation of employees	300
Net interest charge	100

6.6 Under ESA 95, the revenue is considered to be sales of a service. ESA 95 paragraph 4.23 says:

The ratio of sales to costs is 325 / (100+100+300) = 65% As this is over 50% then under ESA 95 the authority is operating as a market body, its sales providing a service at economically significant prices. It is therefore classified to the non-financial corporations sector, as a public corporation.

ESA 95 value added = 325 – 100 = 225.
Under ESA 2010, the application of the 50% rule would be the following:

The ratio of sales to costs is: 325/ (100+100+300+100) = 54 %

In particular, this decreased ratio, now close to the threshold of 50%, calls for further analysis applying qualitative criteria:

- Applying criterion 1 shows that the consultancy firm is the only supplier of government, *but has private competitors that took part in the tendering procedure*. Therefore the qualitative criterion shows that the unit is market

- Applying criterion 2 also shows that the consultancy firm went through a tendering procedure, and is therefore a market unit.

- Applying criterion 3 one can assume that the consultancy firm could respond to a tendering procedure in the private sector, thus making the required efforts to operate in market conditions.

- The only case where the consultancy firm is non-market and classified within government is where it sells less than 50% of its output to customers other than government and does not compete with private producers through a tendering procedure for government or private contracts.

6.7 In this latter case, the accounts (within general government) would be as follows.

ESA 2010 Output = Intermediate consumption (100) + Compensation of employees (300) + Capital consumption (100) = 500

Value added = Output – intermediate consumption = 500 – 100 = 400.

6.8. The changes in the accounts are the following:

In the production approach, the output and value added increase (+ 175) because the sum of costs (500) is higher that the sales of patent services (325).

In the expenditure approach, government final consumption expenditure is recorded equal to output net of sales of services (500 –325 = + 175).

In the income approach, the operating surplus increases (+175).

In ESA 2010, the net lending/net borrowing of the government sector, in which the public unit is reclassified, is - 125. In ESA 95, the net lending/net borrowing of the public unit classified outside government would be – 125 if government was not covering the loss by a capital transfer in that year. In the numerical example presented, it is assumed that government makes a capital transfer of 125 to finance the loss of the public unit. This transfer implies a net lending/net borrowing of - 125 for government; consequently, the change from ESA 95 to ESA 2010 does not involve a change in government net lending/net borrowing (- 125 - in both cases), when government covers the loss the same year.

Accounts for the consultancy firm

Production account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Intermediate consumption (P.2)	100	100	Output (P.1)	325	500
Value added (B.1g)	225	400			

Generation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Compensation of employees (D.1)	300	300	*Value added (B.1g)*	225	400
Operating surplus (B.2g)	- 75	100			

Allocation of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Operating surplus (B.2g)	- 75	100
Balance of primary Incomes (B.5g)	- 75	100			

Secondary distribution of income account					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
			Balance of primary incomes (B.5g)	- 75	100
Disposable income, gross (B.6g)	- 75	100			
Disposable income, net (B.6n)	- 175	0			

Use of income accounts					
Uses	ESA 95	ESA 2010	Resources	ESA 95	ESA 2010
Government final consumption net of sales (P.32)		500 - 325	*Disposable income, gross (B.6g)* *Disposable income, net (B.6n*)	-75 - 175	100 0
Saving, gross (B.8g)	-75	- 75			
Saving, net (B.8n)	-175	- 175			

Capital account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Saving, net (B.8n)	- 175	-175
Capital formation (P.51g)	50	50			
Capital consumption (P.51c)	-100	- 100	Capital transfer (D.99)	125	0
Net lending/borrowing (B.9)	0	- 125			

Financial account					
Changes in assets			Changes in liabilities and net worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
			Net lending / borrowing (B.9)	0	- 125

7. Small Tools

References

	ESA 95	ESA 2010
Small tools	3.70e, 3.108	3.89f, 3.124

Description of the change

7.1 ESA 95 set a lower bound of 500 ECU at 1995 prices for small tools to be recognised as capital expenditure. Purchase of items below this threshold is classified as intermediate consumption.

7.2 In ESA 2010 no fixed threshold is given; the criterion to be recognized as capital expenditure is the use in production for more than one year. In practice, items such as "[Expenditure on] *inexpensive tools used for common operations, such as saws, spades, knives, axes, hammers, screwdrivers, wrenches and other hand tools; small devices such as pocket calculators. . . . is recorded as intermediate consumption*."

Consequences of the change

7.3 It is likely to have a small effect on the measure of capital formation and so GDP, and it is not possible to say the direction in which the level of GDP will change. The change in value added is opposite to the change in intermediate consumption (production approach) and equal to the change in gross fixed capital formation (expenditure approach) and in gross operating surplus (income approach).

8. VAT – based third EU own resource

References

	ESA 95	ESA 2010
VAT for EU own resource	4.25(3), 4.29	4.140

Description of the change

8.1 In ESA 95, VAT- based third EU own resource which is collected in Member States by government and remitted to the Institutions of the European Union was recorded as taxes on production and imports (D2) directly paid to the rest of the world.

8.2 In ESA 2010, VAT-based third EU own resource is recorded as a current transfer paid by the government of each Member State to the Institutions of the European Union. This contribution to the budget of the Institutions of the European Union is recorded under the heading D76 "VAT and GNI-based EU own resources".

Consequence of the change

8.3 The new treatment does not impact GDP, but in the passage from GDP to GNI, the amounts of taxes on production and imports (D2) payable to the rest of the world will decrease. Consequently, GNI will increase by the amount of the VAT based third EU own resource.

9. Index-linked debt instruments

References

	ESA 95	ESA 2010
Index-linked debt securities	4.46c	4.46c, 5.94, 6.56 – 6.57

Description of the change

9.1 Under ESA 95, interest on a loan where the principal is index-linked is the difference between the redemption price and the issue price. This method remains the same in ESA 2010 for index-linked securities where the index is a broad-based price measure.

9.2 ESA 2010 introduces a different method of estimating interest accrued over the years, when the amount to be paid at maturity is linked to a narrow index that includes a holding gain motive, such as the price of gold. In this case, interest accruals are determined by fixing the rate of accrual at the time of issue. This means that interest accrued is the difference between the issue price and the market expectation of subsequent price movements. Deviation of the underlying index from the expected path leads to holding gains and losses.

Consequences of the change

9.3 The estimation of interest on narrow-based index-linked loans is different, and so interest paid and received on loans across national borders will give rise to new estimates of property income to and from abroad. There is no expectation of bias one way or another in the flows and so GNI will be affected, but in an unknown direction.

Numerical example

9.4 For simplicity, consider the example of a zero coupon bond, where there are no coupon payments, and the amount of principal outstanding is linked to a general index. With an issue price of 100 at the start of the first year, the index rises 5 each year and so the interest earned per unit over the three years is calculated as 5 each year. If the long-term average yield on the price of gold is 5 per year, then the market expectation three years from an issue price of 100 is 115, rising at 5 per year.

9.5 However, the actual behaviour of the gold price turns out to be as shown in the table below, showing a sharp drop in the price of gold during the second year. Following the ESA 95 method, interest accrued by year is 5, -20, +25.

9.6 Under ESA 2010, the interest payment is held to that expected at issue, and the difference from the actual price index is accounted for through holding gains and losses

Table 9.1

	Start year 1	Year 1	Start year 2	Year 2	Start year 3	Year 3	End-year 3
Broad Index (actual)	100		105		110		115
Interest assigned (ESA 95)		5		5		5	
Gold index (expected)	100		105		110		115
Gold index (actual)	100		105		85		110
ESA 95 interest		5		-20		25	
ESA 2010 interest		5		5		5	
Holding gain / loss			0		-25		+20

9.7 In this particular case, if the fund is abroad and so the interest is a property income from abroad, we have GNI contributions according to ESA 95 for the narrow gold index of 5, -20, and +25 – a grand total of 10 over the three years.

9.8 Following ESA 2010, the interest contributions are of 5, 5 and 5 – a grand total of 15. So the contribution to GNI under ESA 2010 is different for each year, and also for the total over the years considered for the narrow index from that calculated under ESA 95.

9.9 There is no reason to expect a bias in either direction between the two approaches, and so the effect on GNI over time is expected to be neutral.

10. Central Bank – allocation of output

References

	ESA 95	ESA 2010
Central Bank output	3.63c and 3.70k as amended by Council Regulation (EC) Nº 448/98	3.63c 14.16

Description of the change

10.1 In ESA 95, as amended by Council Regulation (EC) Nº 448/98 on calculation and allocation of FISIM, it is stated:

- Paragraph 3.63 (c) "The Central Bank must not be included in the calculation of FISIM: its output is measured as the sum of costs"

- Paragraph 3.70 (k) "By convention, the Central Bank output should be entirely allocated to the intermediate consumption of other financial intermediaries (subsectors S.122-S.123).

10.2 In ESA 2010, paragraph 3.63 (c) states that:

"The output of the central bank is measured as the sum of its costs".

Therefore, the output of the Central Bank remains unchanged.

However, the allocation of this output is different from ESA 95.

10.3 ESA 2010 paragraph 14.16 states:

"*Commissions and fees for directly measured services invoiced by the central bank both in respect of resident and non-resident units should be allocated to these units.*

Only the part of the total central bank output (sum of costs less commissions and fees) which is not sold has to be, by convention, allocated to the intermediate consumption of other FIs – subsectors S.122 (deposit-taking corporations except the central bank) and S.125 (other financial intermediaries, except insurance corporations and pension funds) – in proportion to the respective value added of each of these subsectors.

To equilibrate the accounts of subsectors S.122 and S.125, the amount of their respective intermediate consumption of the service provided by the central bank is to be counterbalanced by a current transfer (classified under D.759, "other miscellaneous current transfers") received from the central bank, for the same amount".

Consequences of the change

10.4 GDP will increase by the amount of the commissions and fees allocated to non-resident units (exports) and resident units for which these commissions and fees correspond to final consumption (General Government – NPISHs – Households).

GNI will increase by the same amount as GDP.

11. Land improvements recognised as a separate asset

References

	ESA 95	ESA 2010
Land improvements	7.40, 3.106	3.128, 7.50, Annex 7.1

Description of the change

11.1 The ESA 1995 recognised major improvements to land as capital formation, but did not recognise a corresponding asset apart from the non-produced one of land itself. This led to a mismatch between capital formation in major land improvements, and asset categories which showed only natural/unimproved land as non-produced assets. However, AN.2111 "included major improvements that cannot be physically separated from the land itself." ESA 2010 has introduced an extra produced asset category AN.1123 – land improvements, which allows capital formation in land improvements to be matched with a change in the stock of the corresponding asset. In cases where it is not possible to separate the value of the land before improvement and the value of the improvements, the land should be allocated to the category that represents the greater part of the value. This leaves the issue of how to handle land improvements which are recorded as capital formation, but do not lead to a separately identifiable asset of improved land. In this case, most of the value of the land may remain in its natural state and so the mismatch between capital formation as land improvement and asset type as natural land will remain in some cases. There seems no alternative in these cases but to continue to have adjustment items in the "Other changes in volume account" to reconcile opening and closing stock positions for improved land, and natural land.

Non-financial assets classification

	ESA 95		ESA 2010	
Produced assets	AN.11122	Other structures	AN.1122	Other structures
			AN.1123	Land improvements
Non-produced assets	AN.2111	Land underlying buildings and structures	AN.2111	Land underlying buildings and structures
	AN.2112	Land under cultivation	AN.2112	Land under cultivation
	AN.2113	Recreational land	AN.2113	Recreational land
	AN.2119	Other land	AN.2119	Other land

Consequences of the change

11.2 A new asset "land improvements" is introduced into the list of produced assets, and a review will be necessary of the assets classified under ESA 95 under structures and land (AN.1122 and AN.211), to the asset categories specified in ESA 2010. Where land improvements can be identified, these should be classified to the ESA 2010 category AN.1123 and the implications considered for asset stock positions.

11.3 Where land improvements can be identified as part of capital formation categories such as civil engineering and works, these should be identified separately and their value reflected in the opening and closing stock position of land improvements. Where the majority of value in the land improved lies in its natural state, and the improvements cannot be separated then it is land as a non-produced asset where value is added, and this will require adjustment items in the other changes in volume account.

11.4 These changes can cause an increase in GDP and GNI, where the recognition of the new asset "land improvements" allows the capital formation to be fed into a perpetual inventory model which generates estimates of the changes in the stock of land improvements, and the associated capital consumption of a produced asset will be recorded in the accounts. Where the land improvements occur under the ownership of non-market units, especially government, the capital consumption in years after the capital formation is recognised will result in increased output, expenditure and operating surplus. In practice, it is likely that most of such land improvements will have been recorded under ESA 95 AN.1112 "Other buildings and structures" and in this case the balance sheet stock levels and associated estimates of capital consumption will have been recorded under ESA 95.

Numerical example

11.5 Example 1 - Consider a large recreational park created out of waste land with significant cleaning and civil engineering activities to landscape the park and introduce new features such as hills, ponds, etc. If the value of the land at purchase is 10m euros, and the non-separable land improvement as a whole costs 5m euros, then capital formation will be recorded of 5m, the land value will increase to 15m and adjustment items are required in the other changes in volume account.

11.6 Example 2 - If the land improvement activities are 20m euros, then the land will be reclassified to the new asset category of land improvements when not separately identified, and this will require an adjustment item moving the value of the natural land to improved land on completion of the works.

Accounts

11.7 Example 1 - In the first example, land improvement of 5m euros takes place on land worth 10m euros. The total value of the improved land is 15m euros, most of which is due to the value of the natural land, and so the total is classified to recreational land (AN 2.113). This is achieved by

adjustment entries in the other changes in volume account, and so the result is the same as would happen under ESA 95.

	Opening balance			Capital account			Other changes in volume			Closing balance	
	Assets	Liabilities		Uses	Resources		Change in assets	Change in liabilities		Assets	Liabilities
Land improvements (AN.1123)	0			5			-5			0	
Land (AN.2113)	10						+5			15	

11.8 Example 2 - In the second example, land improvement of 20m euros takes place on land worth 10m euros. The total value of the improved land is 30m euros, most of which is due to the value of the improved land, and so the total is classified to land improvements (AN 1.123). Again this is achieved by adjustment entries in the other changes in volume account, but now ESA 2010 allows the new value to be shown under an appropriate produced asset heading of improved land.

	Opening balance			Capital account			Other changes in volume			Closing balance	
	Assets	Liabilities		Uses	Resources		Change in assets	Change in liabilities		Assets	Liabilities
Land improvements (AN.1123)	0			20			+10			30	
Land (AN.2113)	10						-10			0	

11.9 In this second example, the capital formation of 20 can be fed into a perpetual inventory model under the asset category of land improvements and the associated change in stock level and capital consumption calculated. If the owner is a non-market unit such as a local government unit, the estimates of capital consumption – say over 50 years, at a rate of 0.4 per year – will feed into the estimates of government output, expenditure and income as they are derived through a sum of costs approach. The lack of the asset category “land improvements” in ESA 95 prevents such an integrated approach to capital formation, stock levels and capital consumption, with the possibility that the capital consumption would not be separately estimated and included in the sum of costs approach to estimating the output of non-market units.

12. Employee stock options (ESOs)

References

Employee Stock Options	ESA 95	ESA 2010
	-	4.168 – 4.178, 5.221 – 5.222, Annex 7.1, 5.223 – 5.229

Description of the change

12.1 ESOs were introduced as a way for corporations to reward their executive employees. The employer gives the employee an option to buy stocks (shares) in the future, usually at the price when the option is awarded.

12.2 There are three key dates in the process. The "grant date" is when the option is provided to the employee, the "vesting date" is the earliest date the option can be exercised, and the "exercise date" is when the option is actually taken up (or is allowed to lapse). Typically, the employee is granted the option to buy at the price of the grant date of the option. There is then a vesting period when the employee is not allowed to exercise their option right, followed by a period in which the employee can exercise the right if they have remained in post. The options are valued at their fair value as of the grant date. This value is estimated using methods such as a stock options pricing model, which reflect the expected price behaviour of the shares in the future. This estimation is carried out by the corporation and shown in their accounts as an expense corresponding to the compensation of employees for national accounts purposes. Before the option is exercised, the arrangement is a financial derivative which can take a value depending on whether the shares out-perform or under-perform the grant date valuation. However, as an ESO is rarely if ever tradable, this aspect is not usually relevant. In practice, the corporation records compensation of employees according to the number of shares and a fair value estimate of these shares at the vesting date (as a proxy for the exercise date). This is scored as compensation of employees at the vesting date (as a proxy for the exercise date).

12.3 Given that the treatment of ESOs as outlined above is now part of the guidance of the International Accounting Standards Board, data on ESOs for national accounts purposes should be available in company accounts. It is therefore recommended that data be directly sourced from company accounts or from tax administration records, rather than produce independent estimates by the NSI.

Consequences of the change

12.4 In as far as ESOs were not previously included in the definition of compensation of employees, their inclusion will result in higher levels of compensation of employees. Previously, compensation of employees may have been omitted from ESA 95 due to the lack of clear and practical guidance on ESOs in drawing up the accounts of corporations. ESOs were not appropriately reflected as compensation of employees in the company accounts underlying company returns to tax authorities and business surveys. The new business accounting guidance

makes that unlikely to happen, and so ESOs will be recorded as wages and salaries consistent with ESA 2010 guidance.

12.5 So if the corporation accounts make due allowance for the ESOs through recording compensation of employees in line with the current accounting standards, then there is no implication for national accounts, beyond ensuring that the appropriate information is collected through business surveys or from administrative records such as from the tax authorities.

12.6 It may be necessary to examine estimates of income from employment for early years when ESOs were a relatively new phenomenon (early 2000s) and not necessarily captured correctly in company accounts and tax records. This could result in a shift of value from operating surplus to income from employment. This would leave value added unchanged.

13. Super dividends

References

	ESA 95	ESA 2010
Super-dividends		4.56, 20.206

Description of the change

13.1 The subject of super-dividends is not covered in ESA 95. In ESA 2010, the following guidance is given:

Dividends (D.421) excludes super-dividends. Super-dividends are dividends that are large relative to the recent level of dividends and earnings. In order to assess whether the dividends are large, the concept of distributable income is used. Distributable income of a corporation is equal to entrepreneurial income plus all current transfers receivable less all current transfers payable and less the adjustment for the change in pension entitlements. The ratio of dividends to distributable income over the recent past is used to assess the plausibility of the current level of dividends. If the level of dividends declared is greatly in excess, the dividends causing the excess are treated as financial transactions and classified as "super–dividends". Such super-dividends are treated as the withdrawal of owners' equity from the corporation (F.5). That treatment applies to corporations, whether incorporated or quasi-corporate and whether subject to foreign or domestic private control. In the case of public corporations, super-dividends are large and irregular payments, or payments that exceed the entrepreneurial income of the relevant accounting period, which are funded from accumulated reserves or sales of assets. Super-dividends of public corporations are to be recorded as withdrawal of equity (F.5) for the difference between the payments and the entrepreneurial income of the relevant accounting period. In the absence of a measure of entrepreneurial income, the operating profit in business accounts is used as a proxy.

Consequences of the change

13.2 It is possible that some payments recognised as dividends from corporations to shareholders, and in particular from public corporations to government, that were recognised as property income transfers (D.421) under ESA 95, will be recognised as equity withdrawal (F.5) under ESA 2010.

Numerical example

13.3 Consider a public corporation which has paid dividends to government out of entrepreneurial income for the past few years, averaging about 10m euros per year. Then in one year, a payment is made of 40m euros. Under ESA 95, without sufficient description and guidance, this could have been recorded as property income transfer. Under ESA 2010 (backed up by explicit guidance in the MGDD), only 10m euros of this would be scored as property income; the remaining 30m is recorded as a transaction in equity (F.5) – a withdrawal from the equity of the public corporation and an increase in liability of the government. In ESA 95, 40m euros are shown as revenue of the government, with an impact on the net lending/net borrowing of government (reduction of government deficit). In ESA 2010, only 10m euros is revenue impacting the net lending/net borrowing of government; the remaining 30m euros is scored as a financial transaction (cash against withdrawal equity) not impacting the net lending/net borrowing of government.

14. Special Purpose Entities abroad and government borrowing

References

	ESA 95	ESA 2010
Special Purpose Entities (SPEs)	2.55 f	2.17 – 2.20
Special Purpose Units of government		2.27

Description of the change

14.1 The identification and description of SPEs in ESA 2010 is a response to the increasing important role of these vehicles, rather than a change in concept. In ESA 2010, the following characteristics are set out as typical of an SPE:

a. They have no employees and no non-financial assets

b. They have little physical presence beyond a "brass plate" confirming their place of registration

c. They are related to another corporation as a subsidiary

d. They are resident in a different territory from the territory of residence of the parent. In the absence of physical substance, the SPE residence is determined according to the economic territory under whose laws the SPE is incorporated or registered.

e. The only production of an SPE is that represented by payment for services rendered by the local management resource.

14.2 An SPE is treated as an institutional unit when:

14.2.1 it has the same residence as its parent and has autonomy of decision; or

14.2.2 it is non-resident relative to the parent's residence.

But in the case of government being the controlling parent of a non-resident SPE, the financial activities of the SPE are reflected in the government accounts, by convention.

Consequences of the change

14.3 The additional description of the nature and activities of an SPE does not in itself constitute a change of concept from the ESA 95, and will not in itself result in changes to the entries in the national accounts. However, where the SPE is controlled by government, then the ESA 2010 says that by convention, financial assets and liabilities of the SPE will be wholly absorbed in the controlling government financial accounts, both in terms of transactions entered into, and the balance sheet position.

15. Head offices and holding companies

References

	ESA 95	ESA 2010
ESA 95 Holding corporations ESA 2010 Head offices	2.13e, 2.23e, 2.40e,	2.14a, 2.46e, 2.65e
ESA 2010 Holding companies		2.14b, 2.65f

Description of the change

15.1 In ESA 95, holding corporations were defined as institutional units which controlled a group of subsidiaries, consistent with paragraph 4.37 of SNA 1993. For 2008 SNA the terminology was changed to be in line with the International System of Industrial Classification (ISIC) so that the ESA 95 definition applied strictly only to "head offices". In ESA 2010, the term "holding corporation" or "holding company" is used only for an institutional unit holding the assets of a group of subsidiaries and whose principal activity is "owning the group". A holding company under this definition is not engaged in management or subsidiary-controlling activities.

15.2 These re-definitions are consistent with the terminology used in NACE Rev 2.

Activity heading definitions (NACE Rev 2)

70.10 Activities of head offices

This class includes the overseeing and managing of other units of the company or enterprise; undertaking the strategic or organisational planning and decision making role of the company or enterprise; exercising operational control and managing the day-to-day operations of their related units.

This class includes activities of:

-head offices

-centralised administrative offices

-corporate offices

-district and regional offices

-subsidiary management offices

This class excludes:

-activities of holding companies, not engaged in managing, see 64.20

64.20 Activities of holding companies

This class includes the activities of holding companies, i.e. units that hold the assets (owning controlling-levels of equity) of a group of subsidiary corporations and whose principal activity is owning the group. The holding companies in this class do not provide any other service to the businesses in which the equity is held, i.e. they do not administer or manage other units.

This class excludes: active management of companies and enterprises, strategic planning and decision making of the company, see 70.10

15.3 In the SNA 1993, the term "holding company" was taken to represent what we now think of as a "Head office" according to NACE Rev 2. This caused confusion, and companies known as holding companies which only managed financial assets and liabilities on behalf of the enterprise group, could be wrongly classified according to main activity of the group rather the financial corporations sector.

Sector classification

	SNA 1993		SNA 2008	
Unit (ISIC Rev 4)	Label used	Sector	Label used	sector
Head office	*Holding company*	Pre-dominant activity of group	Head office	Pre-dominant activity of group
Holding company	-	Financial corporations	Holding company	Financial corporations (captives S.127)

Consequences of the change

15.4 There is a danger that under ESA 95, holding companies which simply owned assets on behalf of the group could be wrongly allocated to the non-financial corporations sector.

15.5 The situation under ESA 2010 is clear, that such holding companies should be classified to the financial corporations sector. So the consequence is a possible reclassification of institutional units from the non-financial to financial sectors. No aggregates across sectors to national measures will be affected, but value added and financial transactions and financial position measures may be transferred between the non-financial and financial sectors. The value added measures will be negligible, but the change in balance sheet entries for financial assets and liabilities can be very large.

16. Sub-sectors of the financial corporations sector (S.12)

References

	ESA 95	ESA 2010
Financial corporations sector	2.32 – 2.67	2.55 – 2.110

Description of the change

16.1 There is a more detailed breakdown of the financial corporations sector to enable more detailed analysis and provide better consistency with the financial statistics systems of the European Central Bank (ECB) and the IMF. The five sub-sectors of the ESA 95 are expanded to nine sub-sectors in the ESA 2010, as shown in the table below.

Table 16.1 Correspondence between ESA 95 and ESA 2010 financial corporations sub-sectors

ESA 95 Financial corporations sub-sectors				ESA 2010 Financial corporations sub-sectors	ECB labels
Central Bank	S.121	→	S.121	Central Bank	MFIs
Other Monetary and Financial Institutions	S.122	→	S.122	Other Monetary and Financial Institutions	
		↘	S.123	Money market funds	
Other financial intermediaries	S.123	→	S.124	Non-Money-Market Investment Funds	OFIs
		↘	S.125	Other financial intermediaries	
Financial auxiliaries	S.124	→	S.126	Financial auxiliaries	
		→	S.127	Captive financial institutions	
Insurance corporations and pension funds	S.125	→	S.128	Insurance corporations	ICPFs
		↘	S.129	Pension Funds	
Non-financial corporations	S.11		S.11	Non-financial corporations	

16.2 In the ESA 2010 sector classification, S.127 (captive financial institutions) consists of all financial corporations and quasi-corporations who are engaged neither in financial intermediation nor in providing financial auxiliary services, and where most of either their assets or their liabilities are not transacted on open markets. In practice, many units assigned to S.127 will be only recognised as institutional units because their residence is in a different country from that of the parent. It follows that a range of units previously classified under S.123 and S.11 (holding companies for non-financial corporations) will be classified to S.127

under ESA 2010 because of their relationship to the parent rather than the nature of their activity.

16.3 In table 16.1, the arrows and the dotted line relationship show the general correspondence between ESA 95 and ESA 2010 classifications of financial corporations subsectors.

16.4 Particular care should be taken over the classification of financial vehicle corporations (FVCs) and Special Purpose Entities (SPEs). ESA 95 assigned FVCs (holders of securitised assets) to sub-sector *Other financial intermediaries* (S.123), and no mention was made of SPEs. ESA 2010 similarly specifies that FVCs are classified to the sector *Other financial intermediaries* (S.125), but additionally specifies that SPEs qualifying as institutional units and raising funds in open markets are classified to S.127 as captive financial institutions.

Consequences of the change

16.5 There will be more detail shown in tables setting out financial corporations' sub-sectors transactions and stock positions. The identification of money market funds separately from other investment funds enables a closer correspondence between the ESA sub-sectors and the headings used by the European Central Bank. There can also be reclassification of holding companies which under ESA 95 were classified to the dominant activity of the company, but under ESA 2010 are classified to the financial corporations sector. This may cause a large shift of financial assets and liabilities from the non-financial corporations sector to the financial corporations sector.

17. Guarantees

References

Guarantees	ESA 95	ESA 2010
	5.05	1.51k, 4.116, 5.09, 5.188-5.197

Description of the change

17.1 The treatment of loan guarantees has been clarified, and a new treatment introduced for standardised loan guarantees, such as student loans guarantees. The new treatment is that to the extent of the likely call on the guarantees, a financial asset and liability are to be recognised in the accounts. One-off guarantees remain as contingent assets and liabilities.

17.2 ESA 2010 (Box 5.1.1) has a description of the treatment of guarantees as follows:

Guarantees are arrangements whereby the guarantor undertakes to a lender that if a borrower defaults, the guarantor will make good the loss the lender would otherwise suffer. Often a fee is payable for the provision of a guarantee.

17.3 Three different types of guarantees are distinguished. These apply only to guarantees provided in the case of financial assets. No special treatment is proposed for guarantees in the form of manufacturers' warrantees or other form of guarantee. The three types of guarantee are as follows:

a) Guarantees provided by means of a financial derivative, such as a credit default swap. These derivatives are based on the risk of default of reference financial assets and are not linked to individual loans or debt securities.

b) Standardised guarantees are issued in large numbers, usually for fairly small amounts. Even though the probability of any one standardised guarantee being called is uncertain, the fact that there are many similar guarantees means that a reliable estimate of the number of calls under the guarantee can be made. Standardised guarantees are treated as giving rise to financial assets and liabilities, and so recognised as such in the system.

c) One-off guarantees, where the associated risk cannot be calculated with any degree of accuracy, due to a lack of comparable cases. The granting of a one-off guarantee is considered a contingent asset or a contingent liability and is not recorded as a financial asset or a liability.

Consequences of the change

17.4 Provisions for standardised guarantees under ESA 2010 are treated in the same way as non-life insurance: the fees paid (and the property income earned on them) are treated similarly to non-life insurance premiums and the calls under the standardized loan guarantees are treated like non-life insurance claims. Standardized guarantees under ESA 2010 give rise to a set of matching financial assets and liabilities, recorded under the new heading "provisions for calls under standardized guarantees", which were not recognised in ESA 95. For instance, when government provides standardised guarantees for student loans and provisions for the default are made, this will result in an increase in government liabilities and a corresponding increase in assets for the lenders receiving the benefit of the provisions.

Numerical example – case with no fees paid by government

The government grants a guarantee to loans granted by some financial institutions (no fee is charged by the government). When the loan system is launched, the government sets up a liability (AF.66) on an expectation that 20% of the loans will cost the government 20 per granted value of loans of 100. For simplicity, the cost of production of such a guarantee scheme are here taken as nil.

Opening balance sheet					
Assets			Liabilities and net worth		
	Gov't	Fin. inst.		Gov't	Fin. inst.

Non-financial accounts					
Uses			Resources		
	Gov't	Fin. inst.		Gov't	Fin. inst
Insurance claims (D.72)	20		Insurance claims (D.72)		20
Net lending/borrowing (B.9)	-20	+20			

Financial account					
Change in assets			Change in liabilities and net worth		
	Gov't	Fin. inst.		Gov't	Fin. inst.
Provision for calls under standardised guarantees (F.66)		+20	Provision for calls under standardised guarantees (F.66)	+20	
Loans (F.4)		+100	Loans (F.4)		
Currency and deposits (F.2)		-100	Currency and deposits (F.2)		
Net lending/borrowing (B.9)				-20	+20

Closing balance sheet					
Assets			Liabilities		
	Gov't	Fin. inst.		Gov't	Fin. inst.
Provision for calls under standardised guarantees (AF.66)		20	Provision for calls under standardised guarantees (AF.66)	20	
Loans (AF.4)		100	Loans (AF.4)		
Currency and deposits (AF.2)		-100			
			Net worth (B.90)	-20	+20

On year n, there is a call of guarantee due to debtor default (of 20); government issues a bond for the cash payments needed

Opening balance sheet					
Assets			Liabilities		
	Gov't	Fin. inst.		Gov't	Fin. inst.
Provision for calls under standardised guarantees (AF.66)		20	Provision for calls under standardised guarantees (AF.66)	20	
Loans (AF.4)		100	Loans (AF.4)		
Currency and deposits (AF.2)		-100			
			Net worth (B.90)	-20	+20

Non-financial accounts					
Uses			Resources		
	Gov't	Fin. inst.		Gov't	Fin. inst.

Financial account					
Change in assets			Change in liabilities and net worth		
	Gov't	Fin. inst.		Gov't	Fin. inst.
Provision for calls under standardised guarantees (F.66)		-20	Provision for calls under standardised guarantees (F.66)	-20	
Currency and deposits (F.2)	-20	+20			
			Net lending/borrowing (B.9)	0	0

Other changes in volume accounts					
Assets			Liabilities		
	Gov't	Fin. Inst.		Gov't	Fin. inst.
Loans (AF.4)		-20			

Closing balance sheet					
Assets			Liabilities		
	Gov't	Fin. inst.		Gov't	Fin. inst.
Loans (AF.4)		+80	Loans (AF.4)		
Currency and deposits (AF.2)	-20	-80			
			Net worth (B.90)	-20	0

18. Special Drawing Rights (SDRs) of the IMF as assets and liabilities

References

	ESA 95	ESA 2010
Special Drawing Rights	Annex 7.1, 6.27a, 5.33 – 5.35, 7.45	5.56, 5.69 – 5.73

Description of the change

18.1 SDRs are international reserve assets created by the International Monetary Fund (IMF) and which are allocated to its members to supplement existing reserve assets. Under ESA 95, no corresponding liability of these assets was recognised. Under ESA 2010, SDRs are recognised as assets with matching liabilities, although the assets represent claims on the participants collectively and not on the IMF.

Consequences of the change

18.2 Countries holding SDRs have a claim on the Rest of the World sector – all nation members of the IMF. So each member will show a liability to other countries representing their commitment as members of the IMF.

Numerical example

18.3 Suppose that the IMF, in order to increase its Members liquidity, allocates SDRs across them. Country *A*, member of the IMF, receives an allocation of 1000 Euros in SDRs. The treatment in ESA 95 and ESA 2010 would be as follows for the government of the country.

Financial account					
Changes in assets			Changes in liabilities and net financial worth		
	ESA 95	ESA 2010		ESA 95	ESA 2010
SDRs (F.12)		1000	SDRs (F.12)		1000

Other changes in volume account					
Changes in assets			Changes in liabilities		
	ESA 95	ESA 2010		ESA 95	ESA 2010
SDRs (AF.12)	1000		SDRs (AF.12)		

Closing balance sheet					
Assets			Liabilities		
	ESA 95	ESA 2010		ESA 95	ESA 2010
SDRs (AF.12)	1000		Net worth (B.90)	1000	0

19. Payable tax credits

References

	ESA 95	ESA 2010
	4.81	4.81, 20.167, 20.168

Description of the change

19.1 There are two kinds of tax credit systems – one in which the tax credits are non-payable (wastable), and one in which the tax credits are payable.

19.2 Non-payable (wastable) tax credits are those which can only ever be used to decrease a tax liability – they cannot be paid out to the tax-payers or non-tax payers as a benefit. So they are the same as a tax relief.

19.3 Payable tax credits (non-wastable) are those which can be credited against tax liability and only need be paid out to beneficiaries if they are more than any tax liability.

19.4 So payable tax credits can be partitioned into two parts – one part used to decrease tax liability, and another paid direct to recipients as benefit payments, when the benefit exceeds the tax liability.

19.5 The ESA 2010 rule is that for payable tax credits systems only, the whole of the payable tax credits should be registered as a "tax expense", in other words a subsidy or social benefit, irrespective of how much was used to reduce tax liability, and how much was paid direct to beneficiaries.

19.6 This is a change in treatment from ESA 95, although tax credits are not specifically mentioned in it. It is different from 2012 OECD guidance on the treatment of tax and tax credits. Although it is accepted there are various ways of presenting the information for different purposes, the presentation used in Table D of OECD tax statistics is to net off from the tax liability that part of the payable tax credits which are used to reduce tax payments. Further figures are given with this Table D to allow the national accounts presentation, showing all payable tax credits as benefits, and the gross tax position.

Consequences of the change

19.7 The taxes and benefits associated with payable tax credits systems will be shown in the national accounts on a gross basis – i.e. the tax payments will show the full liability before payable tax credits are allowed for, and the whole of the credits under the payable tax credits system will be shown as subsidies or social benefits. The net position remains the same.

Numerical example

19.8 Farmers can claim investment allowances to improve their farms. Before the system was put in place, the table below shows the income and tax for the farmers.

	Farmer A	Farmer B	Farmer C
Profits	5,000	10,000	20,000
Tax liable	0	1,000	5,000
Net income	5,000	9,000	15,000

CASE 1: A farmer can claim tax relief up to the investment allowance he is entitled to, which in this scheme is 2,000 per farmer.

	Farmer A	Farmer B	Farmer C
Profits	5,000	10,000	20,000
Tax paid (recorded in the accounts)	0	0	3,000
Net income	5,000	10,000	17,000

This is a tax relief scheme – the only effect is reducing taxpayers' tax payments, and gives most advantage to the higher income farmers. Net recording is used: tax payments (after tax relief) are recorded in the accounts.

CASE 2: A farmer is given the investment allowance in the form of a tax credit. He can use the tax credit to pay his tax, but only up to the maximum of 2,000.

	Farmer A	Farmer B	Farmer C
Profits	5,000	10,000	20,000
Tax liable	0	1,000	5,000
Tax credit	0	1,000	2,000
Tax paid (recorded in the accounts)	0	0	3,000
Net income	5,000	10,000	17,000

This is a non-payable (wastable) tax credit system – the only effect is reducing taxpayers' tax payments (same result as case 1). Net recording is used: tax payments (after tax relief) are recorded in the accounts.

CASE 3: A farmer is given an investment allowance in the form of a subsidy. Every farmer can claim the allowance – those that pay tax will use the allowance to reduce their tax bill, and any surplus left will be sent straight to the farmer.

	Farmer A	Farmer B	Farmer C
1. Profits	5,000	10,000	20,000
2. Tax liable (recorded in the accounts)	0	1,000	5,000
3. Tax credit (subsidy) (recorded in the accounts)	2,000	2,000	2,000
4. Tax paid	0	0	3,000
5. Payment direct to farmer	2,000	1,000	0
6. Net income	7,000	11,000	17,000

This is a payable tax credit system, and gives equal advantage to all three farmers. It has the same effect as a subsidy system outside the tax system of paying 2,000 per farmer. Gross recording is used: the accounts will record both tax liable (before tax credit) and payable tax credit – and not tax paid as in the two previous cases.

Net figures (OECD)		National accounts figures	
Net taxes (row 4)	3,000	Gross taxes (row 2)	6,000
Net subsidies (row 5)	3,000	Gross subsidies (row 3)	6,000

20. Goods sent abroad for processing

References

	ESA 95	ESA 2010
Goods sent abroad for processing	3.133c	1.51f, 9.48e, 18.24, 18.27, 18.33-18.37

Description of the change

20.1 Between ESA 95 and ESA 2010, there has been a fundamental change in the treatment of goods sent abroad for processing without change of ownership. In ESA 95, such goods were shown as exports on being sent abroad, and then recorded as imports on return from abroad, at a higher value as a result of the processing. This was known as the gross recording method, and effectively imputes a change of ownership so that international merchandise trade figures represent an estimate of the value of the goods being traded.

20.2 The 2008 SNA, BPM6 and the ESA 2010 do not impute a change of ownership, but rather show only one entry – an import of the processing service. This would be an export of the service for the country in which the processing takes place. This recording is more consistent with the institutional records and associated financial transactions. It does however cause an inconsistency with the international merchandise trade statistics (IMTS). This will continue to show the gross value of the exports for processing and returning imported processed goods, as it is based on the physical movement of goods, rather than the economic ownership of the goods.

20.3 Examples of processing in manufacturing services on physical inputs owned by others, include oil refining and assembly of electronics.

Consequences of the change

20.4 There are two main changes. First a new processing service is recognised – manufacturing services on physical inputs owned by others. Second, as there is no change of ownership, goods sent abroad for processing are not included in the exports and imports figures.

20.5 The net processing service is the fee charged for the processing service. It is this service which is recorded in the national accounts - an export of manufacturing services for the country of the processor and an import of manufacturing services for the owner of the goods.

20.6 The value of the service is not necessarily the same as the difference between the value of the goods sent for processing and the value of goods after processing because of holding gains or losses, the inclusion of overheads and measurement errors associated with the goods movements.

20.7 While goods sent abroad for processing and returned after processing are not included in the exports and imports figures, it is recommended that they are included as supplementary items in the external goods and services account.

Numerical example

20.8 Consider the case where a computer manufacturing firm out-sources the assembly of components into computers to an enterprise abroad, and then takes the computers back and sells them on.

20.9 The export of components to the assembly plant abroad is 50, and the assembled computers returned as imports of 90.

The ESA 95 treatment of goods sent abroad for processing

	Industry purchases	Final demand		Total
	Computer manufacturing	Household expenditure (P.31)	Exports (P.61)	
Computers (including) computer parts		90	50	140
computer imports (P.71)	90			90
Value added (B.1g)	50			50
Total output (P.11)	140			

20.10 The computer manufacturing industry of the host country (country A) sends 50m euros worth of components abroad to country B to be assembled. It then imports back the computers now at a value of 90m euros. It sells 90m euros worth of computers to the domestic household market.

20.11 Under ESA 95, a change of ownership in the components is imputed on being sent abroad and again when the computers returned. So the trade in goods figures show an export of 50m euros worth of computer components, and an import of 90m euros worth of computers. The balance of payments on goods and services is for country A is -40m euros. The ratio of value added to total output for the computer manufacturing industry in country A is 50/140.

The 2010 ESA treatment of goods sent abroad for processing

	Industry purchases	Final demand		Total
	Computer manufacturing	Household expenditure (P.31)	Exports (P.61)	
Computers		90	0	90
Import of computer assembly service (P.72)	40			40
Value added (B.1g)	50			50
Total output (P.11)	90			

20.12 The ESA 2010 treatment of goods for processing is on a net basis: only the trade in services is shown and there will be no match with the movement in goods recorded in the IMTS. The processing fee will be shown in the balance of payments international accounts and the corresponding rest of the world sector accounts. BPM6 recommends that where it is known that imports and exports in the IMTS statistics reflect a situation where there is no change in ownership, then the two are recorded side by side in the balance of payments figures, so that the services element can be compared. So for the computer manufacturing industry, using the IMTS system, the components sent abroad for assembly would be shown as an export of 50, and the re-imported computers would be shown as an import of 90. These figures can be set beside each other in the international accounts statistics as supplementary items, with the exports recorded as negative imports, so enabling a net import of computer assembly services of 40 to be derived.

21 Merchanting

References

	ESA 95	ESA 2010
Merchanting	3.133d	3.164d, 9.48e, 18.38 – 18.43

Description of the change

21.1 Merchanting is defined by ESA 2010 (3.164) as:

> ..the purchase of a good by a resident from a non-resident and the subsequent resale of the good to another non-resident, without the good entering the merchant's economy.

21.2 ESA 2010 (9.48e) contrasts merchanting with goods sent abroad for processing -

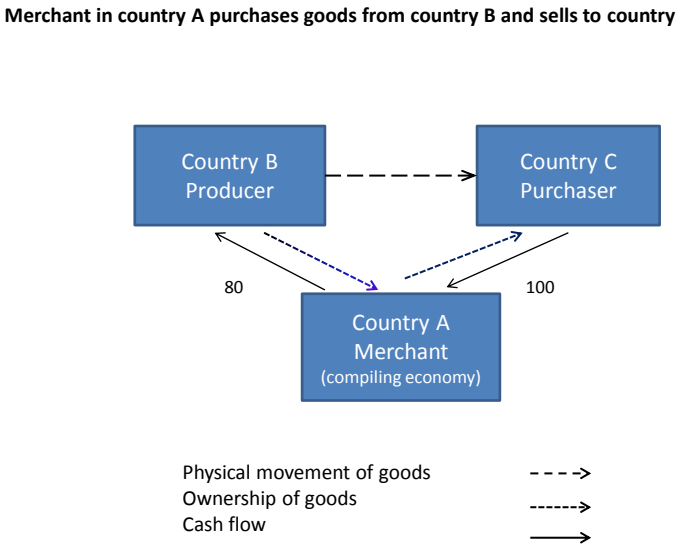
> *….In contrast, buying and reselling goods with non-residents without the goods entering the merchant's economy are recorded as exports and imports in the accounts of the producer and final purchaser, and a net export of goods under merchanting is shown in the accounts of the merchant economy.*
>
> This is a change from the BPM5 and ESA 95 treatment, which excluded merchanting from trade in goods, but instead included the difference between the sale and purchase of goods as a "merchanting" service category within *other business services*. BPM5 recognised this treatment as an exception to the change of ownership principle.

21.3 The new treatment of merchanting is consistent with the change of ownership principle. Merchanting requires goods to change ownership and so transactions are recorded in the trade in goods account.

Numerical example

21.4 The basic model of goods under merchanting is that goods are purchased by a company in country A from a producer in country B. The goods are sold on to a customer in country C, but without the goods ever entering country A. This example is set out in Figure 21.1 (from the UN Publication "The Impact of Globalization on National Accounts").

Figure 21.1 – Merchanting of goods



21.5 The old and new treatment of the merchanting example above is shown in Table 21.1. The merchant in country A buys goods worth 80 from a producer in country B and sells them for 100 to a customer in country C, without the goods ever entering country A. Under ESA 95, country A records the export of a merchanting service of 20 as the difference between the buying and selling price. Country B records an export of goods of 80 and country C records an import of goods of 100, equivalent to the transaction prices of the purchase and sale.

Accounts

Table 21.1 – Treatment of merchanting activity in ESA 95/BPM5 and ESA 2010/BPM6.

ESA 95 / BPM5 treatment			**ESA 2010 / BPM6 treatment**		
	Export	Import		Export	Import
Country A			**Country A**		
Goods			Goods under merchanting	100	
Services: merchanting	20		Goods under merchanting	-80	
			Net exports of goods under merchanting	20	
Country B			**Country B**		
Goods	80		Goods	80	
Country C			**Country C**		
Goods		100	Goods		100
Global balance (Sum of above)			**Global balance (Sum of above)**		
Goods	80	100	Goods	100	100
Services: merchanting	20		(of which goods under merchanting)	(20)	

21.6 So under ESA 95 a global imbalance occurs within the separate categories of goods and services, as the country where the merchant is resident (country A) includes exports of

merchanting **services**, while country B and country C record the value of the **goods** entering or leaving the country. There is a balance at the level of goods and services combined.

21.7 Under ESA 2010, this imbalance is removed by treating merchanting transactions as trade in goods. The acquisition of goods by the merchant in country A is shown under goods as a negative export, while the sales are recorded as a positive export. The difference between sales and purchases of goods under merchanting are recorded as net exports of goods under merchanting in country A. Country B and C continue to record the value of the goods entering and leaving the country. Now the global balance in goods shows 100 recorded for both global exports and global imports of goods.

22. Employers' pension schemes

References:

	ESA 95	ESA 2010
Pension entitlements	4.142, 5.110	5.180, 17.121 – 17.183, Table 17.5
Employers' imputed social contributions	4.99	4.10, 17.139

Description of the change

22.1 ESA 95 recognised pension obligations on the balance sheet only for funded "private" schemes. Hence, the activities of many pension schemes, such as social security and unfunded employer schemes, did not lead to recognition of financial assets/liabilities. ESA 2010 recognises employment-related pension entitlements, irrespectively of whether the necessary assets exist in segregated schemes or not. In the ESA 95 the pension liabilities recognised were limited to the funds available.

However, pension entitlements of unfunded government schemes and social security schemes are recognised in ESA 2010 only 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.

Consequences of the change

22.2 ESA 95 stated that the actual social contributions by employer and employee in a period should be the amount actually paid into a pension fund. ESA 2010 recommends a change in the case of defined benefit schemes. An increase of pension entitlements is to be recorded independently from actual contributions. The level of the employer's contribution should be determined in an actuarial way by assessing the increase in the net present value of the pension entitlement the employee has earned in the period in question, adding any costs charged by the pension fund for operating the scheme and deducting the amount of any contribution the employee makes.

22.3 In general, the government employers' imputed pension contributions are to be estimated in the same way; on the basis of actuarial calculations. Where these actuarial calculations cannot obtain a sufficient level of reliability, and in such cases only, two other approaches based on wages and salaries or on benefits payable are possible to estimate government employers' imputed pension contributions. In case where a Member State reconsiders its way of calculating government imputed social contributions related to civil servants pension schemes, GDP may be impacted.

22.4 ESA 95 treated the activity of non-autonomous pension funds and unfunded pension schemes as ancillary activities where the output was not separately recognized. ESA 2010 recognises that there is a cost to administering any pension scheme including non-autonomous schemes and unfunded schemes.

23. Fees payable on securities lending and gold loans

References

	ESA 95	ESA 2010
Fees payable on securities lending and gold loans		5.243

23.1 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) is recorded by convention as interest. This is a clarification, and the transactions will be recorded under D.41. The change may change GDP very slightly in the case of non-resident users. However, it is unlikely to change GNI given that the borrowers are typically investment banks, and not final consumers.

24. Construction activities abroad

References

	ESA 95	ESA 2010
Construction activities abroad	2.15	2.09b

Description of the change

24.1 Under ESA 95 paragraph 2.15, units which carried out a construction activity abroad for a period of less than a year if the output constitutes gross fixed capital formation, are recognised as notional resident units of the country in which the activity takes place. No such exception is recognised in ESA 2010, and paragraph 2.09 (b) states that "*when the activity is carried on for less than a year, the activity remains part of the activities of the producer institutional unit and no separate institutional unit is recognised*."

Consequences of the change

24.2 This change affects GDP, as under ESA 2010 the construction activity will be recorded as output of the home country, rather than the temporary country of residence of the construction unit. But GNI will be unaffected, as the income from the services and employment required to produce the GFCF abroad in the ESA 95 treatment will be matched by export of the output by the home country under ESA 2010. This transaction is treated in the temporary country of residence of the construction unit as import and consequently as GFCF.

Numerical example

24.3 Consider a construction site unit wholly owned by a company in country A, existing in country B for 6 months and engaged in constructing an industrial building. Any profits from the activity will be remitted back to A. Suppose that local materials used are 50, and local labour employed is 100. Employees of the parent working temporarily in country B earn wages and salaries 200, which will be paid direct to their country of residence A. The value of the building is 500 and recognised as GFCF.

Accounts

ESA 95 – notional institutional construction unit in country B

Production account					
Uses	Country A	Country B	Resources	Country A	Country B
Materials (P.2 part)		50	Output (P.1)		500
Services (P.2 part)					
Value added (B.1g)		450			

Generation of income account					
Uses	Country A	Country B	Resources	Country A	Country B
Wages and salaries (D.11)		300	Value added (B.1g)		450
Operating surplus (B.2g)		150			

Allocation of income account					
Uses	Country A	Country B	Resources	Country A	Country B
			Operating surplus (B.2g)		150
Country A dividends (D.421)	-150	150			
			Wages and salaries (D.11)	200	100
Balance of primary incomes (B.5g)	350	100			

ESA 2010 – Work carried out by parent company in country A

Production account					
Uses	Country A	Country B	Resources	Country A	Country B
Materials (P.2 part)	50		Output (P.1)	500	
Services (P.2 part)					
Value added (B.1g)	450				

Generation of income account					
Uses	Country A	Country B	Resources	Country A	Country B
Wages and salaries (D.11)	300		Value added (B.1g)	450	
Operating surplus (B.2g)	150				

Allocation of income account					
Uses	Country A	Country B	Resources	Country A	Country B
		-	Operating surplus (B.2g)	150	
Balance of primary			Wages and salaries (D.11)	200	100
incomes (B.5g)	350	100			

24.4 In the above set of accounts showing the set of domestic accounts for each country, we can see that

Under ESA 95

GDP(B) = 450, and GDP(A) = 0 for this activity.

Working through the generation and allocation of income accounts, the contribution to GNI of the respective countries is as follows:

GNI(B) = 450 – 150 – 200 = 100 (the income of the local workers)

GNI(A) = 0 + 150 + 200 = 350 (income of parent company workers plus operating surplus remitted back to parent from construction)

In this case the GFCF of country B comes from the output of the construction activity in country B.

Under ESA 2010

GDP(B) = 0, and GDP(A) = 450 for this activity.

Working through the generation and allocation of income accounts, the contribution to GNI of the respective countries is as follows:

GNI(B) = 0 + 100 = 100 (the income of the local workers)

GNI(A) = 450 - 100 = 350 (value added of parent company less compensation of local workers)

In this case, the GFCF of country B comes from the supply of the construction services in the Balance of Payments of 350, together with the local contribution of 150 from materials and labour.

GNI is unchanged in both countries A and B.

25. FISIM between resident and non-resident Financial Institutions

References

	ESA 95	ESA 2010
FISIM between resident and non-resident financial Institutions	Commission Regulation (EC) Nº 1889/2002, Article 1(b)	3.63c 14.11

Description of the change

25.1 ESA 95 was amended by Council Regulation (EC) Nº 448/92 and Commission Regulation (EC) Nº 1188/2002 which defined how to calculate and allocate FISIM.

25.2 Commission Regulation (EC) Nº 1188/2002 stated in its article 1(b) that imports and exports of FISIM should be calculated including FISIM between resident financial institutions (FIs) and non-resident financial institutions.

25.3 The change in ESA 2010 is that there is no calculation and allocation of FISIM between financial intermediaries (classified under S.122 and S.125).

25.4 ESA 2010 paragraph 14.11 states that "By convention, no interbank FISIM has to be calculated between resident FIs, nor between resident FIs and non-resident FIs. FISIM is calculated in respect of non-bank user institutional sectors only".

Consequences of the change

25.5 There will be no consequences for countries which were not calculating FISIM between financial intermediaries. For countries which were calculating FISIM between financial intermediaries, the consequences may be small considering the amounts concerned.

25.6 Exports and imports will be affected when not allocating FISIM between resident FIs and non-resident FIs: as exports of FISIM towards non-resident FIs are no more recorded, GDP decreases. But in the transition from GDP to National Income, this decrease is counterbalanced by an equal increase of interest receivable less payable towards the rest of the world, and hence Gross National Income is unchanged.

25.7 As imports of FISIM from non-resident FIs are no more recorded, intermediate consumption decreases, and therefore GDP increases. But in the transition of GDP to Gross National Income, the increase is counterbalanced by an equal decrease of interest receivable less payable towards the rest of the world, and therefore Gross National Income is unchanged.

25.8 To sum up, GDP is affected (increasing or decreasing) but GNI is unchanged.

Annex 1 SNA 2008 List of issues and clarifications

No.	Issue / clarification	Brief summary of issue	References
1	Repurchase agreements	Should the treatment of repurchase agreements (repos) be changed from the SNA 1993 treatment as collateralised loans? No change.	ESA 2010 5.127 – 5.133
2	Employer retirement pension schemes	Should the liability of government in unfunded employment pensions schemes (and social security schemes) be recognised? Shown in a supplementary table.	ESA 2010 17.121 – 17.183, Table 17.5 Manual 22.1 – 22.4
3	Employee stock options	Should Employee Stock Options to buy shares at a future date as a form of reward for performance, be recognised as compensation of employees? Yes.	ESA 2010 4.168 – 4.178 Manual 12.1 – 12.6
4a	Non-performing loans	Should non-performing loans continue to be recorded at nominal value? Yes (no change) but market value of such loans to be shown as memorandum items.	ESA 2010 7.99 – 7.108
4b	Valuation of loans and deposits; Write-off and interest accrual on impaired loans	Technical measurement issues for write-off and interest with regard to non-performing loans. Shown in memorandum items.	ESA 2010 7.99 to 7.108
5	Non-life insurance services	Calculation of output redefined to avoid volatility due to actual claims, and in particular negative value added measures when a catastrophe occurs. A new algorithm uses a smoothed version of claims (amounts paid out) called “adjusted claims”. Payments for exceptional claims due to a catastrophe are recorded as capital transfers.	ESA 2010 3.74; Chapter 16 Manual 3.1 – 3.22
6a	Financial services	The more varied services offered by financial intermediaries beyond simple intermediation should be recognised. FISIM should be measured allowing for the use of own funds. This is no change from ESA 95 as amended by Regulation 448/98.	ESA 2010 3.64 – 3.73
6b	Allocation of the output of central banks	Should measurement of output be simply sum of costs, or a mixture of sum of costs, charges and FISIM, depending on the nature of the activity of the central bank? Three different activities identified – policy support, supervisory, and financial intermediation. Sum of costs: no change from ESA 95 as amended by Regulation 448/98.	ESA 2010 3.63 Manual 10.1 – 10.4
7	Taxes on holding gains	Does it make sense to treat taxes on holding gains the same way as income tax and so deducted from income when measuring disposable income? Yes, so no change.	ESA 2010 4.77 – 4.78

No.	Issue / clarification	Brief summary of issue	References
8	Interest under high inflation	Different approaches possible – should the SNA 2008 take a line? No.	-
9	Research and development	Should research and development be recognised as capital formation, leading to the creation of Intellectual Property Products? Yes; and so ESA 2010 recognises R&D as capital formation, which is a change from ESA 95.	ESA 2010 3.82 – 3.83; 3.127 (7) Manual 1.1 – 1.14
10	Patented entities	Redundant due to recognition of R&D as capital formation leading to Intellectual Property Products. So patented entities omitted from ESA 2010 asset categories, replaced by intellectual property products	-
11	Originals and copies	Should copies be recognised as separate assets from the originals? Yes, if satisfying the requirements to be assets in their own right. Annual licence payments for use of intellectual property products treated as rentals.	ESA 2010 3.86
12	Databases	Slight redefinition of databases, recognised separately from computer software. No material change.	ESA 2010 3.132; Table 7.1
13	Other intangible fixed assets	Replaced by "Other intellectual property products", a residual category for intellectual property products, not already specified in the categories of *R&D*: *mineral exploration*, *computer software and databases*, and *entertainment, literary or artistic originals.* So no change except name.	ESA 2010 3.132; Table 7.1
14	Cost of ownership transfers	The issue discussed in AEG was how to treat decommissioning costs of large capital projects such as nuclear power stations. It was decided that decommissioning costs (termination costs) should be included in the value of asset at acquisition, then written off as consumption of fixed capital over the life of the asset. When no information on decommissioning costs is available when the asset is acquired, the decommissioning costs are recognised and written off in the year of decommissioning.	ESA 2010 3.129 Manual 5.1 – 5.5
15	Cost of capital services	Should capital services be shown explicitly as a component of value added in the production account? Not in the core accounts.	-
16	Government owned assets	Should a return on capital be imputed when measuring government output as the sum of costs? No, and so no change.	ESA 2010 3.49
17	Mineral exploration	Expanded description of treatment, but no change of concept	ESA 2010 3.136

No.	Issue / clarification	Brief summary of issue	References
18	Rights over non-produced assets by non-residents	Expanded description of non-produced resources apart from land: no fundamental change.	ESA 2010 3.186
19	Military expenditures	Expenditure on military weapon systems to be treated as capital formation – asset boundary expanded.	ESA 2010 3.129b; Annex 7.1 AN.114; 20.190 Manual 4.1 – 4.6
20	Land	Land before improvements remains a non-produced asset. Land improvements to be recognised as produced assets. As such they are classified under AN.112 "Other buildings and structures" as AN.1123 "land improvements"	ESA 010 3.190-3.191; 7.55; AN.1123 Manual 11.1 – 11.8
21	Contracts, leases and licences for the use of underlying assets	Under certain conditions, contracts etc. can be recognised as non-produced non-financial assets. Expanded description but no change of concept.	ESA 2010 3.190 – 3.191; 7.55; Annex 7.1 AN.22
22	Goodwill and other non-produced assets	Expanded description, no change of concept.	ESA 2010 3.192; 7.59 - 7.60
23	Obsolescence and depreciation	Expanded description, no change of concept.	ESA 2010 6.13
24	Public-Private Partnerships (Build-Own-Operate-Transfer schemes: BOOTs)	Description of these new schemes included and guidance given on how to determine economic ownership of assets created. No change of concept.	ESA 2010 15.41; 20.276-20.290
25	Units in the 1993 SNA	A bundle of issues regarding definition and sector classification of units.	See below
25a	Ancillary units	Inconsistencies between national and regional measures of value added by kind of activity are removed by a revised definition of ancillary units.	ESA 2010 1.31; 3.12–3.13
25b	Holding companies, special purpose entities, trusts	Entities holding assets and liabilities, with no production. How should they be treated? More guidance given on classification of units.	ESA 2010 2.14a - 2.14b; 2.46e; 2.65e – 2.65f Manual 15.1 – 15.5
25c	Multi-territory enterprises	How should the economic measures of multi-territory enterprises be split amongst the territories? Activity allocated according to appropriate indicators.	ESA 2010 18.17
25d	Unincorporated enterprises in ROW	Unincorporated enterprises abroad – recognition of branches – no change.	ESA 2010 18.12 – 18.14
25e	Non-resident SPEs linked to government	Under ESA 95, governments non-resident SPEs can borrow – do we need a special case to avoid misrepresenting government deficit and debt? Yes - Government controlled SPEs abroad will have their borrowing and lending fully reflected in the government accounts.	ESA 2010 2.27 Manual 14.1 – 14.3
26	Cultivated assets	Minor re-wording of definition of the asset category "cultivated assets"	ESA 2010 Annex 7.1 AN.115

No.	Issue / clarification	Brief summary of issue	References
27	Classification and terminology of non-financial assets	Do the changes in treatment of various categories of capital formation require a revision to the asset categories recognised? Yes, changes made.	ESA 2010 Annex 7.1 AN.1 – AN.2
28	Amortization of intangible non-produced assets	How best to treat acquisition and degradation of non-produced assets, with particular reference to mobile phone spectrum transactions. Changes described for treatment of contracts, leases and licences.	ESA 2010 7.57
29	Assets boundary for intangible non-produced assets	Is there a need for a residual category of "intangible non-produced assets"? Yes – change to classification heading.	ESA 2010 Annex 7.1 AN.1179
30	Definition of economic assets	Is there a need for review and expansion of the definition of an economic asset? More text in SNA 2008, but no material change.	ESA 2010 7.15
31	Valuation of water	Is more guidance needed on water, as it moves from being a largely free good, to an economic good? No changes in concept or categories.	ESA 2010 Annex 7.1 AN.214
32	Informal sector	Should there be more descriptive material in the SNA to cover this important topic? Yes, but no changes of concept.	-
33	Illegal and underground activities	Is more clarification needed on the content of these activities? No change in concept or guidance.	ESA 2010 1.79, 11.26
34	Super dividend, capital injections and re-invested earnings, with special regard to transactions between government and public corporations	There is more description and guidance on these difficult and high-profile areas.	ESA 2010 4.55 – 4.67, 20.193-20.209 Manual 13.1 – 13.3
35	Tax revenues, uncollectable taxes, and tax credits	How should licence payments be scored, and should tax credits under a payable tax credits system be recorded on a gross or net basis? Changes made with regard to licence payments and tax credits.	ESA 2010 4.27, 4.79 – 4.82; 20.167 – 20.168 Manual 19.1 – 19.8
36	Public / private / government sector delineation issues.	Is more guidance needed on criteria for a) recognising an institutional unit, and b) between market and non-market activity? Yes – more material included, with the prospect of classification changes as a result.	ESA 2010 1.34 – 1.37; Diagram 2.1; Table 2.2; 2.32 – 2.44; Table 2.5; 3.16 – 3.41; 20.05 – 20.55 Manual 6.1 – 6.8
37	Activation of guarantees, and constructive obligations	Should standardised guarantees be recognised as liabilities, otherwise guarantees remain contingent? Yes – standardised guarantees recognised as liabilities.	ESA 2010 1.51k; 4.116; 5.09; 5.188 – 5.197; Box 5.1.1 – 5.1.2 Manual 17.1 – 17.4

No.	Issue / clarification	Brief summary of issue	References
38a	Change of economic ownership (as a term)	Is more description needed to clarify what is meant by economic (as opposed to legal) ownership?	ESA 2010 1.90
38b	Assets, liabilities and personal effects of individuals changing residence	Should transactions, financial and real, be included in the SNA when migration occurs? No - Data issues are so great that no practical effect will be observed, except the dropping of "migrant transfers" as a capital transfer.	-
39	Residence		
39a	Meaning of "national economy"	More description need on fringe items such as ships' crews, patients? No, nothing more needed.	ESA 2010 2.10
39b	Predominant centre of economic interest (as a term)	Should this term be adopted to help in the determination of the residence of households, where there are several country candidates to be the country of "residence". Yes, but additional material needed to ensure no unnecessary change to business units.	ESA 2010 2.07
39c	Residence of entities with little or no physical presence	Although entities may have negligible physical presence and/or production, to recognise financial and income transaction, it may be necessary to use jurisdiction as a criterion for recognition as a non-resident institutional unit. Yes – accepted as a clarification.	ESA 2.07
40	Goods sent abroad for processing	Should there be a change to "no imputation of a change in ownership", and a processing service observed in the national accounts? Yes, change to "no imputation".	ESA 2010 3.166d Manual 20.1 – 20.12
41	Merchanting (in international trade)	In ESA 95, recorded as a service, with no trade in goods. A change in recording is observed in BPM 6 and in the national accounts. The merchanting margin that was shown as services is now shown as the margin on goods, classed as export of goods, and recording the imports as negative exports of goods.	ESA 2010 3.164 d Manual 21.1 – 21.7
42	Retained earnings of mutual funds, insurance companies, and pension funds	ESA 95 introduced imputation of income to holders of fund shares, with a corresponding financial investment if retained in the fund, consistent with the treatment of retained earnings for insurance companies and pension funds. Should the SNA adopt a similar treatment? Yes, so no change in concept from ESA 95 to ESA 2010. However, more detailed description may result in practice in more recognition of these imputed flows.	ESA 2010 4.70 – 4.71

No.	Issue / clarification	Brief summary of issue	References
43	Interest and related issues		
43a	Treatment of index-linked debt securities	Should debt instruments indexed to a foreign currency be denominated in that currency? Yes, not a major change. How should indexation amounts be classified – interest or revaluation? Status quo of interest retained, except for "narrow-index" where holding gains and losses recognised	ESA 2010 5.94, 6.56 ESA 2010 6.57 Manual 9.1 – 9.9
43b	Fees payable on securities lending and gold loans	How should the fees be scored in the accounts – financial services or property income? Fees to be scored as interest – property income.	ESA 2010 5.243 Manual 23.1
43c	Debt concessions	When concessional interest rates are charged on loans, how should they be treated – at nominal rates, or should transactions be imputed showing the economic reality? Change – record at nominal values, and show a current transfer reflecting the difference between the concessional rate and the market rate.	ESA 2010 20.241 – 20.242
43e	Debt re-organisation	Information item – no change	ESA 2010 20.229
44	Financial asset classifications	Classification expanded to take account of new instrument types such as the increasing variety of financial derivatives – options, forwards, and employee stock options.	ESA 2010 5.12-5.15
44a	Monetary gold	Financial asset or valuable? Change - "allocated gold" is treated as a valuable, and "unallocated gold" as a financial asset.	ESA 2010 5.57 – 5.63
44b	Special Drawing Rights (SDRs)	Should SDR allocations be considered liabilities? Yes – a change	ESA 2010 5.69 – 5.73 Manual 18.1 – 18.3
44c	Deposits and loans	Is more text required on deposits and loans? Are tradable loans same as securities? More on loans and deposits. Tradable loans treatment unchanged.	ESA 2010 5.79 ESA 2010 5.120 – 5.123

No.	Clarification	Brief summary of issue and outcome.	References
C1	Other subsidies on production to non-market producers	ESA 95 says that unrequited transfers to non-market producers should be subsidies, provided they are awarded fairly to market and non-market producers alike. No change in ESA 2010.	ESA 2010 4.36
C2	Treatment of seigniorage profits from the issue of coins	Should the profits government makes from issuing coins be recorded as government revenue? No. The cost of producing coins is government expenditure and not netted against receipts from issuing currency.	-
C3	Review of SNA terminology for user-friendliness	There are too many "other" categories in the classifications, which are difficult to understand, without an extensive knowledge of the other related classifications. Unchanged.	-
C4	Volumes and prices in relation to taxes on products	More explanation would help. More descriptive material in SNA 2008.	ESA 2010 10.36 – 10.42
C5	Clarification of components of compensation of employees	More description would help? Yes, some re-writing	ESA 4.02 – 4.07
C6	Review of SNA codes	Make the codes more suitable for electronic exchange – e.g. omit use of *. No change.	-
C7	Should the first appearance of value in financial derivatives be entered as other changes in volume (OCVA)?	No – no change	-
C8 and C9	Classification of financial assets: F5 Shares and other equity/ F52 Mutual Funds	Is more description of equity needed, and expansion of financial asset classification to show listed shares separately from unlisted shares? ESA 95 already showed listed/unlisted breakdown (called quoted/unquoted).	ESA 2010 5.141 -5.159
C10	Measurement of non-market output	Should direct measures of output be used in the volume estimates of government output? No.	ESA 2010 10.28 – 10.30
C11	Concept of jobs and concept of persons	Should the concept of persons employed be introduced in SNA 2008, and should the ESA 95 definitions of employment, self-employment and unemployment be adopted? Yes.	ESA 2010 11.11-11.25
C12	Top level industry classification	What are the appropriate aggregations for the top ten activities of the economy – should this be part of the SNA? No agreement, and no change	-

No.	Clarification	Brief summary of issue and outcome.	References
C13	Clarification of Chapter 21 on satellite accounts	How much should be in the chapter? Text changes made.	ESA 2010 1.40 – 1.43, Chapter 22
C14	The definition of interest	Debtor or creditor approach? No change - accrual accounting of interest remains based on the debtor approach	-
C15	The Public Sector	More descriptive material is needed on the public sector, and sector delineation issues with the government sector and private sector – more text offered.	ESA 2010 1.35, 20.303-20.320
C16	Measurement of labour inputs	Consistency needed with latest position of the ILO on hours worked and measuring employment. Yes.	ESA 2010 11.10
C17	Measurement of output for own final use	Introduction of a mark-up when the output provided by market producers is measured as sum of costs – Yes, change made.	ESA 2010 3.20, 3.45
C18 – C29	Minor amendments to text	Mostly adopted	-
C30	Classification and terminology of financial corporations in the updated SNA	Should the classification be expanded to accommodate recent innovation in financial corporation and their activities? Yes.	ESA 2010 2.55 – 2.71