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CONCEPTS OF GOVERNMENT DEBT

Paper submitted by the European Central Bank¹

INTRODUCTION

1. Government debt has gained a prominent role in the European Union because of the Maastricht Treaty provisions and the Stability and Growth Pact. Together with the government deficit, gross consolidated government debt is used to monitor the fiscal developments in the Economic and Monetary Union (EMU or euro area)². In this context, it is often stated that in the absence of sufficient fiscal discipline, the conduct of a stability-oriented monetary policy becomes difficult. Overall, debates over fiscal measures and their effects on government debt

¹ Paper prepared by Reimund Mink. Without implicating, the author would like to thank Werner Bier and Jeff Golland for their comments. The views expressed in this paper are not necessarily those of the European Central Bank.

² According to the Maastricht Treaty establishing the European Community (as amended by the Treaty of Amsterdam) Article 121 (1), second indent, requires "the sustainability of the government fiscal position; this will be apparent from having achieved a government budgetary position without a deficit that is excessive, as determined in accordance with Article 104 (6)". Article 2 of the Protocol on the convergence criteria referred to in Article 121 of the Treaty stipulates that this criterion "shall mean that at the time of the examination the Member State is not the subject of a Council decision under Article 104 (6) of this Treaty that an excessive deficit exists." Article 104 sets out the excessive deficit procedure. According to Article 104 (2) and (3), the Commission shall prepare a report if a Member State does not fulfill the requirements for fiscal discipline, in particular if: (a) the ratio of the planned or actual government deficit to GDP exceeds a reference value (defined in the Protocol on the excessive deficit procedure as 3% of GDP), unless: - either the ratio has declined substantially and continuously and reached a level that comes close to the reference value; or alternatively, - the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value; (b) the ratio of government debt to GDP exceeds a reference value (defined in the Protocol on the excessive deficit procedure as 60% of GDP), unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

are fascinating and useful to study. Otherwise, the measurement of government debt is often seen as a rather straightforward exercise. Nevertheless, much work has been done in recent years to improve the quality of debt measurement within the framework of the government accounts. Eurostat has published its ESA95 manual on government deficit and debt, which is seen as an indispensable complement to the European System of Accounts (ESA95) to aid the application of its methodology for calculating government deficit and debt in the EU Member States. The European Central Bank (ECB) has also prepared a guide on annual government finance statistics. It describes the methodology for compiling the tables in the ECB Monthly Bulletin showing the euro area general government fiscal position.³ The ECB derives the euro area aggregates from harmonised and regularly updated data provided by the National Central Banks (NCB) of the EU. Finally, the IMF Government Finance Statistics Manual 2001 (GFSM) was published in December 2001. It is much closer to the System of National Accounts (SNA93) than the 'old' GFSM of 1986.

2. Based on this work, the paper deals with concepts of government debt. The next section introduces two main debt concepts: EDP debt and ESA95 debt. It also identifies the elements, which allow reconciling between these two. Net ESA95 debt concepts are presented and aggregation and consolidation issues are discussed to compile euro area debt figures. Work is ongoing to derive extended debt measures, which are described in the third section. They are based on broader instrument coverage and on a wider inclusion of institutional units. The fourth section entails some conclusions.

CONCEPTS OF GOVERNMENT DEBT

3. Essentially two main government debt concepts are currently considered: EDP government debt and ESA95 government debt.

EDP debt

4. Referring to the methodology used in the European Union, the measurement of government debt has been strongly influenced by the Protocol No. 20 on the excessive deficit procedure annexed to the Maastricht Treaty in 1992⁴. Together with the Council Regulation (EC) No 3605/93, it defines government, debt and other aggregates like surplus/deficit, interest expenditure, investment, and gross domestic product by reference to the accounting rules as described in the ESA – at that time ESA79⁵.

5. “EDP debt” is general government gross debt as defined in the Council Regulation (EC) No 3605/93: Its Article 1 (5) defines general government gross debt as: (1) comprising the consolidated liabilities of the ESA95 general government sector (S.13); (2) in the ESA95 categories: currency and deposits (AF.2), securities other than shares, excluding financial derivatives (AF.33), and loans (AF.4); and (3) measured at “nominal value”, in line with

³ Section 6 of euro area statistics.

⁴ Council Regulation (EC) No 3605/93 of 22 November 1993 and its amendment, Council Regulation (EC) No 475/00 of 28 February 2000, on the application of the Protocol on the excessive deficit procedure annexed to the Treaty establishing the European Community.

⁵ The excessive deficit procedure requires prompt submission of fiscal data twice annually. See Council Regulation (EC) No 1467/97 of 7 July 1997 and the Ecofin Council conclusions on the “Code of best practice on the compilation and reporting of data in the context of the excessive deficit procedure” from 18 February 2003.

Protocol 5 of the EC Treaty, further defined in the regulation as the “face value.” This means, in particular, that government debt is not affected by changes in market yields, and excludes usually unpaid accrued interest⁶. The national accounts categories, considered for EDP debt, are called “EDP debt instruments.” EDP debt is sometimes labelled as “Maastricht debt” and the relevant ESA95 categories as “Maastricht debt instruments.”

6. Looking more closely at the various elements of its definition, five main conceptual issues are implicitly covered: EDP debt is defined as gross debt and covers consolidated liabilities of the ESA95 general government sector, i.e. the ES95 categories currency and deposits, securities other than shares, excluding financial derivatives, and loans. Furthermore, it is measured at nominal value. These five conceptual issues are separately considered.

Gross government EDP debt

7. EDP debt is recorded as a gross concept in the sense that assets are not deducted from liabilities. Net debt positions are derived by subtracting government holdings of financial assets from gross debt.

Consolidated EDP debt

8. EDP debt is also recorded consolidated. It means that any government debt held as financial assets by government units is excluded.

9. Table 1 shows consolidated and non-consolidated government debt as well as all consolidating elements allowing reconciliation between the two aggregates. At the level of a sub-sector of general government, there are three ways to measure debt depending on the consolidation rule.

i) The value of debt instruments owned outside general government. These are the financial assets held by the private sectors and the rest of the world vis-à-vis government (as shown in column 6 of Table 1). The first four elements of this column are also called the sub-sector EDP debt components, which add up to the general government consolidated gross debt. Another way to define the sub-sector debt components is to define them as sub-sector non-consolidated debt (column 7 of Table 1) less the financial assets they own that are liabilities of other general government sub-sectors (columns 1 to 4 or column 5), which is equal to column 6.

ii) The value of debt instruments owned outside the sub-sector. This corresponds to “debt issued by” the sub-sectors and to sub-sector non-consolidated debt. For central government, it corresponds to cell 1,7 excluding cell 1,1 (n-c l CG minus l CG CG).

iii) The value of all debt instruments including those owned by other units within the same sub-sector. This is how it would be recorded in non-consolidated financial balance sheets according to ESA95 (for central government, it corresponds to cell 1,7).

Table 1

Financial assets and liabilities by government sub-sector on a from-whom-to-whom basis

Financial assets by sub-sector						
1	2	3	4	5	6	7
Central government	State government	Local government	Social security funds	General government	Private and RoW	Total

⁶ One exception is the treatment of zero-coupon bonds, for which the nominal value is defined as the redemption value.

Liabilities by sub- sector	1	Central government	ICGCG	ICGSC	ICGLG	ICGSSF	ICGGG	cICGPR	nclCC
	2	State government	ISGCC	ISGSG	ISGLG	ISGSSF	ISGGG	cISGPR	nclSC
	3	Local government	ILGCC	ILGSC	ILGLG	ILGSSF	ILGGG	cILGPR	nclLG
	4	Social security funds	ISSFCC	ISSFSC	ISSFLG	ISSFSSF	ISSFGG	cISSFPR	nclSSF
	5	General government	IGGCC	IGGSC	IGGLG	IGGSSF	IGGGG	cIGGPR	nclGG
	6	Private and RoW	cIPRCC	cIPRSC	cIPRLG	cIPRSSF	cIPRGG	cIPRPR	nclPR
	7	Total	ncaCG	ncaSC	ncaLG	ncaSSF	ncaGG	ncaPR	nca =n-c

Institutional units of the ESA95 general government sector

10. EDP debt relates to debt incurred by ESA95 general government sector institutional units. Government institutional units are described in the ESA95 as “institutional units which are other non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth.”⁷ The principal economic functions of government institutional units are (1) assume responsibility for the provision of goods and services to the community or to individual households at prices that are not economically significant, and (2) to redistribute income and wealth by means of transfer payments, financing both of these activities primarily from taxation or transfers from other government units. Government institutional units comprise central government, state government, local government and social security funds units, which are aggregated to the corresponding sub-sectors.

11. Essentially two criteria have to be checked to determine whether a unit belongs to the general government sector. First, is the unit a public or a private institutional unit? This depends on who controls it.⁸ Second, is the public institutional unit a market or a non-market producer? This depends on the 50%-criterion, which examines whether more than 50% of the production costs are covered by sales. This criterion should apply over a range of years.

12. Furthermore, a public institutional unit redistributing national income and wealth has to be classified within the government sector, while a public institutional unit dealing with financial intermediation belongs to the public financial corporation sector. The government sector does not include public corporations and it is therefore to be distinguished from a more broadly defined public sector (see Table 2).

Table 2
Sector classification of institutional units

	Controlled by government?	
	Yes	No

⁷ See ESA95, paragraph 2.68, and also SNA, paragraph 4.104.

⁸ The term ‘control’ is defined as the ability to determine general policy, and is an essential criterion for sector classification.

Financed mainly by sales of goods and services?	Yes (market)	Public corporations	Private corporations, households or non-profit institutions
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13. Separate criteria are needed to classify social security funds units. First, it has to be clarified whether such units are organised for certain groups who are obliged to participate (social insurance), or for individuals⁹. While (funded) pension schemes for individuals are usually classified as pension funds, different cases could be distinguished for social insurance schemes: if these schemes are organised by employers for their own employees they should also be classified outside the government sector. Schemes organised for other groups, either funded or unfunded, and controlled by government, should be classified within the government sector (Table 3).

Table 3
Sector classification of pension schemes

Collective/individual	Who for?	Funding and control?		Classification
Social insurance scheme for certain groups who are obliged to participate	Organised by employers for own employees	Funded	Funded by employees	Employer's sector
			Funded by other units ¹	Pension funds
	Other groups	Unfunded	Controlled by government ²	Government
			Controlled by other units	Pension funds
			Controlled by government	Government
			Controlled by other units	Unlikely
Individual	Individuals	Funded	Pension funds	

¹ Contributions are paid to insurance corporations and autonomous pension funds that are separate units (see ESA95, annex III, and paragraph 5).

² General government is responsible to manage the institution in respect of the settlement or approval of the contributions and benefits independently from its role as a supervisor of pension funds (see ESA95, paragraph 2.74 and annex 3, paragraph 4).

14. The delimitation of the government sector described above is influenced by institutional arrangements in different economies and can distort comparisons of the debt data. This distortion applies particularly to health and education services when general government sectors are compared and to the provision of public utilities and transport when the public sectors are compared. In the process of implementing ESA95, questions were discussed concerning in which sector to classify, for instance, public hospitals and homes for elderly people. Significant differences among the EU countries were revealed concerning the way government made payments to public hospitals. In this context, only payments made according to a system of pricing applied to both public and private hospitals were considered as sales also determining the classification of such units.

15. Another example refers to schools. Following the criteria listed above it has to be considered whether, in a specific case, the general government controls a school or not. This could be checked by the criteria like whether the government's approval is needed for creating new classes, for making investments in fixed capital or for borrowing or whether the government can prevent the school from ending its relationship with government. Otherwise, the government does not control the institutional unit if it just finances the school or it supervises

⁹ See ESA95, paragraphs 4.87 and 4.86(a).

the quality of education the school has to provide.

Instrument categories treated as EDP debt

16. The categories treated as EDP debt are the ESA95 financial instruments coins and deposits, securities other than shares, excluding financial derivatives, and loans. Accordingly, EDP debt covers the main part of ESA95 debt liabilities of government institutional units.

17. Coins and deposits correspond to the value of general government liabilities in coins, transferable deposits and other deposits. Generally, the Treasury issues coins and they are therefore a government liability, but not necessarily debt. Transferable deposits are unlikely to be incurred by government since these are deposits that can quickly and easily be converted into currency or transferred by cheque or other means. Other deposits include time deposits, savings deposits, savings books and savings certificates. For example, some government treasuries operate savings accounts for households, perhaps managed by postal services or other public agencies. This category would also include specific arrangements for banks or public corporations depositing cash with government. Both deposit categories also include short-term liabilities in the form of repurchase agreements.

18. Short-term securities other than shares include bills and other short-term notes and bonds with an original maturity of less than one year, issued predominantly by the Treasury¹⁰. Short-term securities are usually very liquid, of large denomination and exchanged on the money markets between banks, other financial institutions and large investors. Other government units might also issue such short-term instruments, sometimes called commercial paper or euro-commercial paper. Long-term securities other than shares cover all types of debt securities as bonds, notes and T-bills with an original maturity of more than one year and issued by the various government sub-sectors.

19. Loans comprise short-term and long-term borrowing by government units from the central bank, MFIs, other financial corporations and the rest of the world. The category also includes imputed transactions in loans in respect of debt assumptions as well as imputed loans in respect of finance leases.

Valuation of EDP debt

20. EDP debt is valued at nominal value. Article 1 (5) of Council Regulation (EC) No 3605/93 defines nominal value as the face value¹¹. It also defines the notion of face value in three specific cases: First, for indexed securities, the face value changes in line with the changes of the index. In particular, it is adjusted when the principal and coupons of bonds indexed on consumer price indices are regularly adjusted. Second, foreign currency-denominated liabilities are converted into domestic currency at the market exchange rate at the end of each accounting period. Third; liabilities denominated in foreign (or even domestic) currency that are exchanged or swapped for another currency, including the domestic currency, are converted taking into account the new after-swap currency. The rate of conversion is the

¹⁰ ESA95 defines short-term as an original maturity of one year or less. While ESA95 allows flexibility up to two years, and even five years for certain securities issued by general government, its use is not recommended, as it would substantially distort international comparisons.

¹¹ Council Regulation (EC) No 3605/93 of 22 November 1993 on the application of the Protocol on the excessive deficit procedure annexed to the Treaty establishing the European Community (OJ L 332, 31.12.1993, p.7)

rate stipulated in the contract.

21. The face value is usually understood to be the redemption value¹². It is therefore equal to the amount (contractually agreed) that the government will have to refund creditors at maturity. In principle, interest accrued on a liability is not accounted for in the valuation of this liability. The nominal value rule also means that deposits cover interest accrued when it is actually credited to the holder and available for withdrawal. Instruments that pay no coupons, like zero coupon bonds, are recorded for the full redemption value. Instruments carrying actual coupons are also measured at a redemption value, which would be much closer to the issue value than with zero coupon bonds. The redemption price of some securities is linked to an economic index such as a retail price index. The nominal value of an index-linked liability corresponds to its face value adjusted by the index-related change in the value of the principal accrued to the end of the year.

ESA95 debt

22. ESA95 debt deviates from EDP debt in terms of its financial instrument coverage, its treatment of accrued interest, and of its application of the market valuation method. Furthermore, ESA95 debt may be presented consolidated or non-consolidated, gross or net of financial assets. Such calculations depend on the availability of appropriate balance sheet data.

23. The stock of ESA95 government debt should be recorded at market value at the end of the accounting period. This refers to securities other than shares. Otherwise, the nominal value is used for currency. For loans and deposits, the amount of principal applied is that which the debtors are contractually obliged to repay the creditors when the deposits would be liquidated on the date the balance sheet is set up. ESA95 debt also includes accrued interest.

Instrument coverage of ESA95 debt

24. While general provisions are made on institutional sectors, liabilities and their valuation rules, there is no specific definition of government debt in ESA95. Nevertheless, ESA95 government debt is supposed to cover the financial instrument categories currency and deposits, securities other than shares, loans, insurance technical reserves, and other accounts payable.

25. Accordingly, the definition of government debt is such that it includes all liabilities of government institutional units except shares and other equity¹³. ESA95 debt liabilities, which are not included in EDP debt are therefore financial derivatives such as swaps and FRAs, insurance technical reserves, including pension liabilities, trade credits originating from delayed payments to providers of goods and services, advances and remaining other accounts payable.

26. ESA95 debt deviates from debt as specified in various IMF manuals and compilation guides. The IMF GFSM, for instance, states that “all liabilities in the GFS system are debt

¹² Eurostat's Deficit and Debt Manual gives additional guidance for specific instruments.

¹³ Eurostat's Deficit and Debt Manual also includes shares and other equity in government debt, which is not in line with the debt definitions in other international handbooks.

except for shares and other equity and financial derivatives.”¹⁴ According to the IMF External Debt Statistics Guide, financial derivatives should be excluded as no principal amount is advanced that is required to be repaid, and no interest accrues on any financial derivative instrument.

27. For ESA95 debt, the net incurrence of financial derivatives is regarded as a debt liability. It includes inflows and outflows related to purchases and sales of options, warrants, margin calls on futures, lump sums and termination payments related to all types of derivatives such as swaps and FRAs. Recording net settlement payments as financial transactions requires the recording of holding gains or losses in the other flow accounts. The obligation to make a payment appears as a liability in the account of the payer, and as a financial asset in the account of the receiver. Any profit or loss realised on a future is also recorded in financial derivatives. The change in value of the future in the balance sheet, immediately before the holding gain or loss is realised, is recorded in other flows as nominal holding gains or losses. Accordingly, the change in the balance sheet, or debt, under ESA95, is the result of transactions and other flows.

28. Liabilities in the form of other accounts payable can arise through prepayments by non-government entities. This is often a feature of contracts using the private sector to operate public infrastructure, or when government takes delivery of goods and services and pays later. Finally, insurance technical reserves as well as prepayments of insurance premiums and reserves of outstanding claims on the liability side of the government accounts might occur due to non-autonomous pension funds established by government units.

Accrued interest recorded as ESA95 debt

29. In ESA95 interest is recorded as accruing continuously even if, in cash terms, it is paid infrequently or through the difference between the buying and selling price of the instrument. Interest, which accrues, but is not paid in cash, is recorded as being reinvested in the instrument that generates the interest. This means that the value of the instrument¹⁵ recorded in the balance sheet, and hence total debt, increases as a result of accruing unpaid interest. Interest on a deposit account that is added to the account is regarded as having been paid and so is added to the nominal value of the instrument.

Valuation of ESA95 debt

30. The market valuation principle used for valuing ESA95 debt is determined by the use of prevailing market prices, which are seen as the best indication of the value that economic agents currently attribute to specific financial claims. It provides a measure of the opportunity cost to both the debtor and the creditor¹⁶. The valuation principle adopted in the ESA95 or SNA93 follows broadly this method. It is the method used in national accounts when drawing up the ESA95 balance sheets¹⁷. Securities other than shares are to be valued at their current market prices. For currency, the nominal or face value is used, and for deposits the amount of principal that the debtors are contractually obliged to repay the creditors when the deposits

¹⁴ See the IMF GFSM 2001, paragraph 7.142.

¹⁵ For traded instruments one would expect to see this reflected in the market price.

¹⁶ When market-price data are unavailable for tradable instruments, there are two general methods for estimating market value or, as it is sometimes called, for fair value: (a) Discounting future cash flows to the present value using a market rate of interest; and (b) Using market prices of financial assets and liabilities that are similar.

¹⁷ See ESA95, paragraphs 7.25 to 7.32.

would be liquidated on the date the balance sheet is set up. The same applies to loans for which the values have to be recorded in the balance sheets that the debtors are contractually obliged to repay to the creditors, even in cases when the loan was traded at a discount or premium¹⁸.

31. The major difference between the two valuation methods is therefore that market valuation takes account of market price changes, whereas nominal value does usually not¹⁹.

Reconciliation between EDP debt and ESA95 debt

32. EDP debt and ESA95 debt are based on the same delineation of the government sector, but they deviate in terms of their instrument coverage, their treatment of accrued interest and the valuation method applied.

¹⁸ See ESA95, paragraphs 7.46 to 7.51.

¹⁹ Nevertheless, liabilities denominated in foreign currencies shall be converted into the national currency at the representative market exchange rate prevailing on the last working day of each year.

Table 4**Reconciliation between EDP debt and ESA95 debt by component**

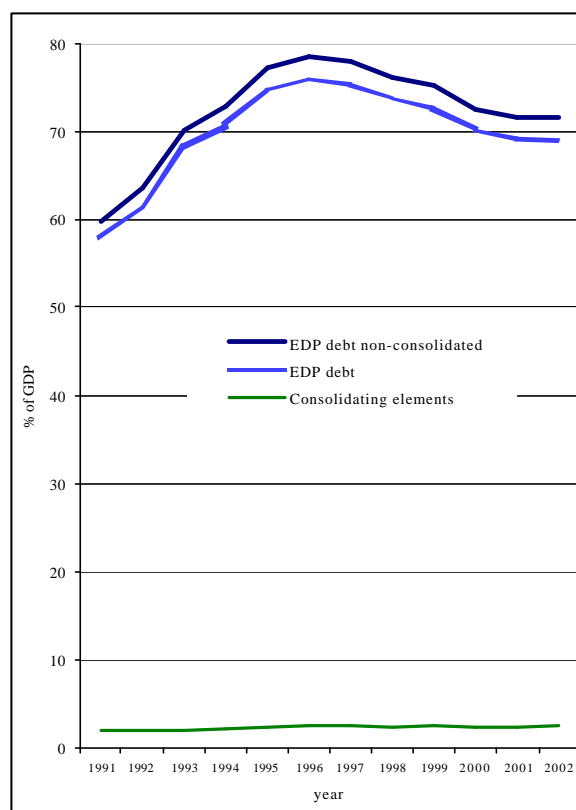
EDP debt, consolidated	
Consolidating elements	
EDP debt, non-consolidated	
ESA95 debt instrument coverage	
Inclusion of accrued interest	
Move from nominal to market valuation	
ESA95 debt, non-consolidated	

33. To reconcile between consolidated EDP debt and non-consolidated ESA95 debt, four steps are distinguished. These are, first, the move from consolidated to non-consolidated data, which can be done for EDP debt as corresponding data sets are available for the euro area (see Table 4). Further steps are the expansion of the instrument coverage, the inclusion of accrued interest, and the move from nominal to market valuation.

Consolidating effect

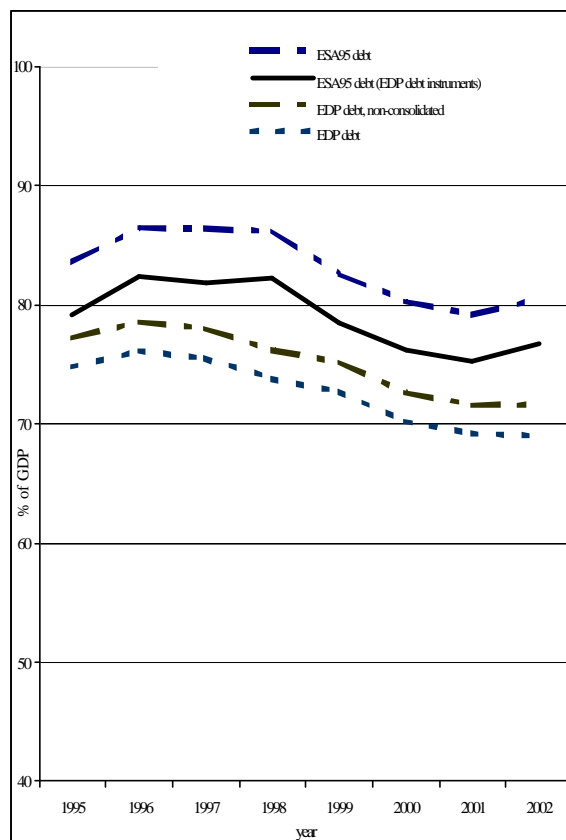
34. The liabilities that are assets of government units have to be identified to compare consolidated and non-consolidated EDP debt. Consolidation for some instruments can involve large amounts when direct institutional financial links exist between different government units, for example when central government lends to local government or when social security funds have large holdings of government bonds. In the latter case, consolidation can be sensitive to sudden swings in the composition of investment portfolios.

35. Chart 1 presents the euro area EDP debt consolidated and non-consolidated. It shows that the consolidating elements are rather stable and also small. Non-consolidated EDP debt was 71.6% of GDP in 2002, which was 2.6% higher than consolidated EDP debt.

Chart 1**EDP government debt, consolidated and non-consolidated**
as a percentage of GDP, end of year**Instrument coverage effect**

36. Reconciling between EDP debt and ESA95 debt, the instrument coverage effect can be measured by subtracting ESA95 non-consolidated gross debt for only those instruments included in EDP debt from the ESA95 non-consolidated gross debt. As shown in Chart 2, this effect for euro area government debt was 3.8% of GDP in 2002, which was mainly due to the inclusion of trade credits and other payables, while debt in the form of financial derivatives was rather negligible. Otherwise, the magnitude of the effect might be overestimated because of the inclusion of accrued interest as partly covered by other payables as ESA95 provides some flexibility in recording accrued interest either together with the underlying instrument or within other accounts payable.

37. While the instrument coverage effect can be properly isolated only the compound effect due to the different treatment of accrued interest and to the different valuation methods can be compiled. The revaluation effect may involve large amounts, particularly for recently issued zero coupon bonds, while it may be rather small for short-term securities, loans and deposits. For compiling the compound interest accrued and valuation effect, the EDP non-consolidated debt has to be subtracted from the ESA95 non-consolidated debt with the corresponding instrument coverage. For 2002, EDP non-consolidated debt was 71.6% of GDP and the corresponding ESA95 debt was 76.7% of GDP, so the compound interest accrued and valuation effect was 5.1% of GDP (Chart 2).

Chart 2**EDP debt and ESA95 debt as a percentage of GDP, end of year**

38. The overall (and surprisingly small) difference between the EDP (gross consolidated) debt (69%) and the ESA95 (gross non-consolidated) debt (80.5%) was 11.5% of GDP in 2002, broken down into the instrument coverage effect (3.8%), the compound interest accrued and valuation effect (5.1%) and the consolidating effect (2.6%), as shown in Chart 2. For the time being, no further split of the accrued interest and valuation effect can be provided.

Net ESA95 debt

39. The analysis of government debt sometimes takes into account government assets. In this context, there is difficulty in ascertaining the extent to which assets might be made usable to meet outstanding government debt.

40. Table 5 provides an overview of the ESA95 gross debt components for end 2002, from which the holdings of financial assets by government can be subtracted to derive net ESA95 debt figures. The debt and assets components are broken down by original maturity and financial instrument. As ESA95 gross government debt was 80.5% of GDP in 2002 and its holdings of financial assets was 26.8% of GDP, ESA95 debt was 53.7% of GDP. Other net debt positions can be derived with a breakdown of debt by original maturity into short- and long-term. Table 5 shows that short-term net debt is rather negligible in comparison to long-term net debt.

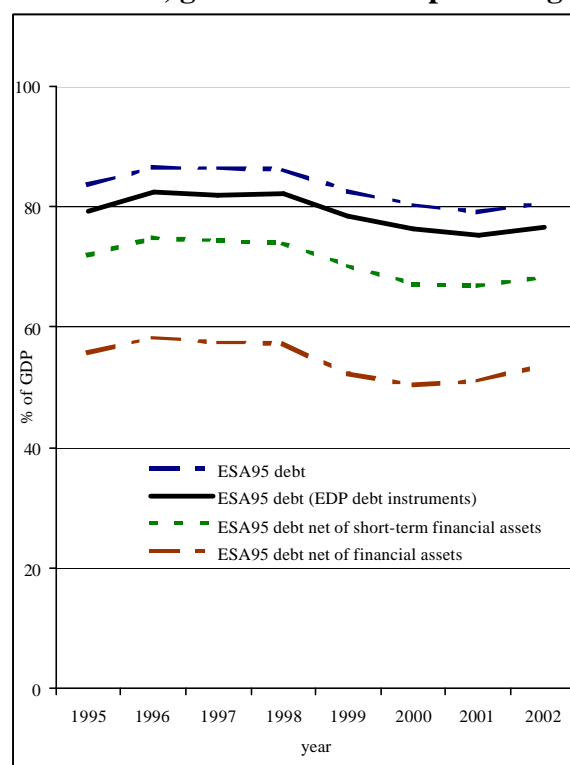
41. Chart 3 exhibits the movement of two selected net debt positions. The first position is

equal to ESA95 debt net of all short-term financial assets, which are supposed to be liquid, like currency and deposits, short-term debt securities and loans as well as other accounts receivable.

Table 5
ESA95 debt, gross and net as a percentage of GDP, end of 2002

	ESA95 gross debt	Government financial assets	ESA95 net debt
	1	2	3 = 2-1
Total	80.5	26.8	53.7
Short-term	16.1	12.1	3.9
Currency and deposits	4.2	6.0	
Debt securities	6.8	0.3	
Loans	1.3	0.6	
Other accounts	3.8	5.3	
Long-term	64.4	14.6	49.8
Debt securities	52.0	1.7	
Shares & other equities	-	7.7	
Loans	12.4	5.2	

Chart 3
ESA95 debt, gross and net as a percentage of GDP, end of year



42. The second net debt position excludes all financial assets leading to a debt-to-GDP ratio of 53.7%, which was 26.8% lower than ESA95 gross non-consolidated debt and 15.3% lower than EDP debt in 2002.

Issues related to the compilation of euro area debt

43. Two issues have to be further considered when compiling euro area debt figures: first, the conversion of national series into a common currency, before aggregating the data; and, second, the extension of the consolidation principle to intra (EMU) “cross-border” positions between national governments.

Aggregating national series

44. Various papers have dealt with the methods for compiling euro area aggregates based on national series and by applying current, fixed or PPP exchange rates²⁰. Here, two alternative aggregation methods are considered: the method using current exchange rates and the method using fixed exchange rates. Under the current exchange rate method the actual market exchange rates in the year are used to aggregate national data. The disadvantage of this method for producing a time series is that the volatility of exchange rates can distort significantly the analysis of the series. Under the fixed exchange rate method the respective exchange rates in one chosen year are used for all years. The problem with this method is that long-term differences in inflation rates in different countries can seriously distort the aggregated long-run time series by giving too little weight, concerning data in the distant past, to countries with higher inflation rates.

45. Therefore, the constant real exchange rate method is used for the aggregated series published by the ECB. It has the advantage that the aggregated series are not distorted by erratic short-term movements in exchange rates, while it does take account of long-run differences in inflation rates.

Consolidating cross-border positions

46. For the compilation of euro area government debt, consolidation should be extended to “cross-border” debt positions. These are positions between national governments, and between governments and the EC budget. The rule is that cross-border consolidation in the euro area should cover the same categories that are consolidated at the level of national governments. Positions between governments of the euro area which are likely to be the most important for consolidation are those related to holdings by one government (usually by the social security fund sub-sector) of liabilities issued by another government in the euro area. This consolidating adjustment has not been undertaken in the euro area debt statistics compiled by the ECB because of a lack of data.

EXTENDED MEASURES OF GOVERNMENT DEBT

47. Other government debt concepts refer to extensions based on broader instrument coverage or a wider inclusion of institutional units. This second type of extended concepts refers to public sector debt, which also includes, in a consolidated presentation, the debt of public corporations and of general government.

Extended instrument coverage

²⁰ See in particular: Winder (1997), “On the construction of European area-wide aggregates: a review of the issues and empirical evidence”, presented at the 51st session of the International Statistical Institute; Hong and Beilby-Orrin (1999), “Compilation Methodologies for Euro Zone Aggregates”, OECD Working Papers.

48. ESA95 debt and EDP debt exclude two types of government liabilities. First, these are liabilities recognised by extended accounting systems like provisions for expected but uncertain future payments arising from past events. Furthermore, unfunded pension schemes operated by government units for their employees, paid out of government's current resources, and without special reserves are not included as well as contingent liabilities like guarantees. Second, liabilities of entities are also not covered, which are regarded as subsidiaries of government in other accounting systems but outside the general government sector in national accounts. Both possible amendments are currently discussed in the framework of updating SNA93.

GFSM government debt

49. The IMF Government Finance Manual 2001 (GFSM) was published in December 2001. It is closer to SNA93 than the previous version of the GFSM²¹. It shows a full reconciliation of transactions, other flows, and balance sheets, at market value, like SNA93 and ESA95.

50. However, it treats unfunded pension schemes operated by employers differently from SNA93 or ESA95 because it records financial transactions for them and a balance sheet liability. So GFSM debt includes liabilities for government employee unfunded pension schemes, which are not covered in EDP debt or ESA95 debt²².

Debt according to standards adopted by the Public Sector Committee of the International Federation of Accountants

51. The International Accounting Standards Board (IASB) develops International Accounting Standards (IAS), which will be adopted by quoted companies resident in the European Union countries by 2005. In parallel, the International Federation of Accountants' Public Sector Committee (IFAC PSC) prepares a series of International Public Sector Accounting Standards (IPSASs) based on the IASB work.

52. A Steering Group has been established to oversee work on the convergence of accounting and statistical standards. The detailed work is being undertaken by an IMF/OECD task force. It has already made proposals to the newly established Advisory Expert Group of the Inter-Secretariat Working Group on National Accounts (ISWGNA) to update the SNA93 in ways that are consistent with existing and emerging accounting standards.

53. Some of the proposals under consideration affect government debt, like the treatment of contingent liabilities in the form of government guarantees and the treatment of provisions. In general, guarantees are not recognised as "economic assets" in national accounts. These are contingent liabilities that are not recorded in the system except when they are traded.

54. Other issues are more conceptual. Do the future social security benefits specified by

²¹ It is recognised that the implementation of the fully integrated accrual accounting system presented in the GFSM will take a long time for many countries. Countries will need to revise their fiscal data classification systems to reflect fully the accrual basis of recording while still capturing data on a cash basis. In this context, three approaches are described, either relying on already available accrual accounting data, or using national accounts' data that are already available on an accrual basis, or reclassifying cash data to the new framework.

²² See GFSM, paragraph 4.35.

current law constitute government debt in the same sense as the other debt components? The answer to this question depends at least partly on how the liability is perceived by households. If households believe that these benefits will be paid with the same probability that the other debt components will be paid, then it may be sensible to count the present value of the benefits as government debt. Similar questions arise for civil service, retirement or medical benefits, also including the expected cost of contingent liabilities arising from loan guarantees and insurance programmes.

Public sector debt

55. The second type of extended measures refers to the debt of a wider range of institutional units. This leads to public sector debt, which also covers, in a consolidated presentation, the debt of public corporations.

56. Following the delimitation of the general government sector the public sector covers, in addition to the general government units, all public producers organised as public financial and non-financial corporations. Essentially, the latter are government owned or government controlled businesses. A broader coverage is provided by the public sector and any private sector non-profit institutions serving households and corporations that are mainly financed by government and produce public service outputs. Such organisations are classified as the private sector in national accounts because they do not satisfy the criterion for being controlled by government, but some of these organisations exist mainly to produce public services financed by payments from government and user charges. For example, in some countries universities are classified as the private sector but receive a high proportion of their income from government and are expected to conform to various standards and procedures stipulated by government. The organisations often feel like they are part of the public sector even though statistically they are not.

57. While the coverage of the general government sector has been thoroughly examined during recent years, there are no comprehensive national accounts data for this broad definition of the public sector that includes non-profit institutions serving households and private corporations that are mainly financed by government and produce public service outputs. In some countries there are national accounts' data for the narrower definition.

58. The fact that governments own public corporations, financial and non-financial, and have the capacity to direct them to conduct quasi-fiscal activities argues to the importance of more general reporting of supplementary information on the public sector accounts and public sector debt. Generally accepted accounting practices (GAAP) focus on the ability to control as a criterion for consolidated reporting. Their application to government finance reporting may in future provide added impetus to reporting on the fully consolidated public sector, with separate reporting by sub-sector. Nevertheless, the delineation between the public and the private sector might be rather cumbersome to define.

CONCLUSIONS

59. In this paper, two concepts of government debt have been discussed by describing their relationship to the national accounting framework: EDP debt and ESA95 debt. It is possible to reconcile the two debt concepts by isolating the consolidating effect, the instrument coverage

effect, the interest accrued effect and the valuation effect. Compiled for the euro area, these various effects are rather small and stable. The ESA95 financial balance sheet data allow the derivation of debt positions net of selected financial assets. Their development deviates to some extent from the pattern shown for gross debt figures due to share price movements.

60. Compared to the data provided for EDP debt and ESA95 debt no comprehensive data are available for extended government or public sector debt. The project to update SNA93 has already started, which also deals with the review of the existing accounting standards for the government and public sector. Implementing new proposals might also improve the coverage of data for public corporations, which are necessary to compile harmonised public sector accounts and are useful for debt compilations.

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