GOVERNMENT DEFICIT AND DEBT IN THE ECONOMIC AND MONETARY UNION

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ABSTRACT

The data on government deficit and debt have gained a prominent role in the European Union because of the Maastricht Treaty provisions and of the Stability and Growth Pact. Together with the government deficit, gross consolidated government debt is used to monitor the fiscal developments in the EU countries and in the Economic and Monetary Union (EMU). Considerable efforts have been devoted in the recent years to improve the quality of the deficit and debt measurement in the framework of the government accounts. Eurostat has published its ESA 95 Manual on government deficit and debt, which is seen as an indispensable complement to the European System of Accounts (ESA95) to support the use of its methodology for calculating government deficit and debt in the EU countries. The European Central Bank has also prepared a Guide on annual government finance statistics. Finally, the IMF Government Finance Statistics Manual 2001 was published in December 2001.

Based on this work, the paper deals with the measurement of government deficit and debt in the EMU also focusing on its comparability across national economies. Mainly two types government deficit and debt measures are discussed: EDP and ESA95 deficit and debt. Furthermore, the concepts of deficit-debt-adjustment and net debt are introduced and assessed in the framework of fiscal policy stance.
1. **INTRODUCTION**

Government deficit and debt are concepts used to analyse fiscal policy. Because of the Maastricht Treaty provisions and of the Stability and Growth Pact they have gained a prominent role in Europe to monitor fiscal developments in the European Union countries, but also in the Economic and Monetary Union (EMU or euro area). 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. The crowding out of private credit demand implies that price stability can only be preserved at a higher interest rate level. Moreover, the lack of a solid fiscal framework increases the risk that fiscal policies in individual countries might disturb macroeconomic stability of a monetary union. Looking at the long term, in view of the foreseeable fiscal pressures due to population ageing it is seen of particular importance that national governments act soon to secure and maintain fiscal stability. The requirements for sound public finances and low debt under the Stability and Growth Pact set the right incentives for governments to prepare for this challenge.

Debates over fiscal measures like government deficit and debt and their effects on economic activity are fascinating and useful to study. In this context, the usefulness of such ‘traditional’ fiscal indicators are often questioned because they would offer an incomplete picture of fiscal operations not reflecting the evolution of government assets in addition to liabilities.

Much work has been done in recent years to improve the consistency and quality of fiscal indicators. They are compiled within an integrated system of government accounts as part of the European System of Accounts (ESA95). Moreover, Eurostat’s Manual on government deficit and debt is seen as an indispensable complement to the ESA95 to support the application of its

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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 (EDP). According to Article 104 (2) and (3), the Commission shall prepare a report if a Member State does not fulfil 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.

3 The ESA95 shares the same methodology like the System of National Accounts (SNA93).
methodology for calculating government deficit and debt for the EU countries. The European Central Bank (ECB) has also prepared a Guide on annual government finance statistics which describes the methodology for compiling the tables in the ECB Monthly Bulletin showing the euro area general government fiscal position. Finally, the IMF Government Finance Statistics Manual 2001 (GFSM) was published in December 2001. It is much closer to the SNA93 than the ‘old’ GFSM of 1986.

The paper deals with conceptual issues related to the measurement of government deficit and debt for the euro area as described within such an integrated system. Two different deficit and debt concepts are derived in sections two and three. They refer to the methodology of the Excessive Deficit Procedure (EDP) and of the ESA95. To evaluate the link between deficit and debt, the concept of the deficit-debt-adjustment is introduced in section four. Taking into account that traditional fiscal indicators are often seen as insufficient to assess the impact of fiscal policy net debt figures are derived in section five and compared with gross debt. Section six follows with some conclusions.

2. DEFICIT MEASURES

2.1 EDP government deficit

Referring to the methodology used in the European Union, the measurement of government deficit has been strongly influenced by the Protocol No. 20 on the Excessive Deficit Procedure (EDP) annexed to the Maastricht Treaty in 1992. Together with the Council Regulation (EC) No 3605/93, it defines government surplus/deficit and debt and other aggregates like interest expenditure, investment, and gross domestic product by reference to the accounting rules as described in the ESA – at that time ESA79.

Article 1 of the regulation defines "government deficit" as the balancing item "net borrowing/ net lending" of general government. Regulation (EC) No 2558/2001 amends ESA95 to record net settlement flows under swaps and forward rate agreements (FRAs) as financial

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4 The adherence to ESA95 across the EU countries adds discipline to the application of the standard in that ESA95 attempts to put clarity to all of the “borderline” issues related to compiling a set of accounts – especially for government.

5 Section 6 of euro area statistics. The ECB derives the euro area aggregates from harmonised and regularly updated data provided by the National Central Banks (NCBs) of the EU countries.

transactions rather than as interest. Accordingly, it introduces the term EDP B.9, the version of general government net borrowing/net lending, in which swaps and FRAs are treated as interest. Furthermore, Eurostat took a decision on 13 July 2000 to treat generally the allocation of mobile phone licences as the sale of a non-financial asset also affecting the EDP deficit.\(^7\)

Chart 1 shows the EDP deficit by euro area country since 2000. It includes the net settlements under swaps and FRAs as property income as well as the proceeds from the sale of UMTS licences. While the impact of the net settlements under swaps and FRAs was rather limited, the effect of the UMTS proceeds was exceptionally high in 2000 leading to a surplus in the German government accounts of 1.3% of GDP.

![Chart 1](chart1.png)

**Chart 1**

**EDP government deficit**

Euro area and euro area countries, as a percentage of GDP

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8 UMTS proceeds present the actual government revenue from the sale of Universal Mobile Telecommunications System (UMTS) licences, also known as third-generation (3G) mobile phone licences.
2.2 ESA95 government deficit

The ESA95 government deficit is defined as the general government net lending/net borrowing (B.9) characterised by treating net settlement payments in respect of swaps and FRAs as financial transactions. Table 1 summarises the relationship between the EDP deficit and the ESA95 deficit.

**Table 1**
ESA95 and EDP deficit

<table>
<thead>
<tr>
<th>ESA95 deficit (-)/surplus (+) (B.9) (net lending (-)/net borrowing (+) of the capital account)</th>
<th>+ Property income received from net settlements paid under swaps and FRAs</th>
<th>= EDP deficit (-)/surplus (+) (EDP B.9)</th>
</tr>
</thead>
</table>

Chart 2 shows, for the euro area, the ESA95 deficit compared to the EDP deficit. In addition to the property income received from net settlements paid under swaps and FRAs, the one-off effects due to the sale of UMTS licences have been excluded from the ESA95 deficit figures. In 2000, the modified ESA95 deficit was -0.9% of GDP compared to an EDP surplus of 0.2% of GDP, mainly due to the sale of UMTS licenses. There are negligible differences of less than 0.1% of GDP resulting from the different treatment of swaps and FRAs.

**Chart 2**
ESA95 and EDP government deficit
euro area, as a percentage of GDP

The ESA95 deficit decreased steadily, from more than -5% of GDP in 1995 to less than -1% of GDP in 2000. It indicates the consolidation efforts in the government sector during this period,
and at the end mainly due to the sale of UMTS licences. As a consequence, euro area government switched from a major net borrower to a net lender in 2000 as reflected by the EDP deficit. Afterwards, the deficit increases continuously up to -2.7% of GDP in 2003.

In theory, the ESA95 deficit is the balance of two accounts, the capital account and the financial (transaction) account. The difference between government saving including net capital transfers and capital formation is net lending or net borrowing, the amount government requires from the financial markets to meet its own needs. The details of how government meets its borrowing requirement is revealed in the financial account, were accounting identities require net lending/net borrowing equal to the net acquisition of financial assets less the net incurrence of liabilities. The ‘net’ in the financial account refers to purchases less sales of assets, and the issuances less repayments of liabilities.

Although conceptually the same, the value of government net lending/net borrowing derived in the capital account usually differs from that in the financial account. The difference between the net lending/net borrowing derived in the capital account and that derived in the financial account is defined as the government’s statistical discrepancy. Some countries do not show a discrepancy between the two measures of net lending/net borrowing. Rather, they force equality in some way, such as splitting the difference between the capital account and the financial account. There is no recognition of such a discrepancy in the SNA93 or the ESA95. The practice often used is to report the discrepancy. Net lending/net borrowing estimates from both accounts, however, are close for the government sector, reflecting a generally high quality of information available. The reason for this are that major efforts have been made to reconcile the government accounts in the EDP framework. In contrast, net lending/net borrowing estimates for other non-financial sectors, where the data tend to be of lower quality, diverge by significant amounts.

Where those figures, net lending/net borrowing derived from the capital account vis-à-vis net lending/net borrowing derived from the financial account, differ due to statistical discrepancies, the balance of the capital account is used.

The data underlying the measurement of the EDP and the ESA95 government deficit are compiled and published by the ECB in its Monthly Bulletin, Table 6.1 of the euro area statistics section. Table 6.1 shows revenue, expenditure and the deficit/surplus as the balancing item for the euro area. Revenue and expenditure are further broken down into current and capital.

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9 Measures of government deficit or debt are expressed as ratios of GDP. The measure of GDP used for compiling the deficit ratios is the ESA95 GDP.
revenue and expenditure. ESA95 government deficit is presented by government sub-sector, and EDP deficit by euro area country.

3. Debt Measures

3.1 EDP government debt

Together with the EDP deficit, gross consolidated government EDP debt is used to monitor the fiscal developments. “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 (A.F.2), securities other than shares, excluding financial derivatives (A.F.33), and loans (A.F.4); and (3) measured at “nominal value”, in line with Protocol 5 of the EC Treaty, further defined in the regulation as the “face value.” This means, in particular, that the government debt is not affected by changes in market yields, and excludes usually unpaid accrued interest.¹⁰ The national accounts categories, considered for EDP debt¹¹, are called “EDP debt instruments.”

The data underlying the measurement of EDP government debt are compiled and published by the ECB in its Monthly Bulletin, Table 6.2 of the euro area statistics section. Table 6.2 shows the details of EDP government debt for the euro area broken down by financial instrument, holder, government sub-sector, original and residual maturity, and by currency.

Chart 3 shows EDP euro area government debt as a percentage of GDP since 1995. It increased to 75.5% of GDP in 1996 and decreased afterwards up to 69.2% of GDP in 2002. In 2003, the EDP debt for the euro area rose by 1.4% of GDP to 70.6%. EDP government debt in the euro area countries spans a wide range. The highest reported debt-to-GDP ratios were in Belgium, Greece and Italy with values above 100% in 2003.

Compared to the euro area EDP government debt, lower debt levels are reported for Denmark (45% of GDP in 2003), Sweden (52%) and the UK (40%). Furthermore, all ten new Member States have government debt-to-GDP ratios for 2003, which were below the ratio for the euro area countries as a whole ranging between 5% for Estonia and 72% for Malta in 2003.

EDP debt covers the financial instruments coins and deposits, loans, short-term securities and long-term securities. Nearly 50% of euro area government debt in 2003 was issued as long-term debt securities,

¹⁰ One exception is the treatment of zero-coupon bonds, for which the nominal value is defined as the redemption value.

¹¹ EDP debt is sometimes labelled as “Maastricht debt” and the relevant ESA95 categories as “Maastricht debt instruments.”
compared to almost 44% in 1995. The debt-to-GDP ratio of short-term securities issued as government debt fell to 7.4% in 2003, down from 9.9% in 1995. The importance of loans as a government debt instrument has also decreased. Loans taken by euro area government were only 11.9% of GDP in 2003, compared to more than 17.9% in 1995. Coins and deposits corresponding to the value of liabilities of general government in coins, transferable deposits and other deposits count for 2.1% of GDP in the euro area in 2003.

Chart 3
EDP government debt
euro area, as a percentage of GDP, end of year

3.2 ESA95 government debt
There is no specific definition of government debt in ESA95. A broad definition refers to all debt liabilities of government institutional units. These are all liabilities excluding shares and other equity: currency and deposits, securities other than shares, loans, insurance technical reserves, and other accounts payable. 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 is applied that 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 and can be derived
gross or net of selected assets, consolidated or non-consolidated. Such calculations depend mainly on the availability of appropriate balance sheet data.

Annex B of ESA95 specifies the tables, which the Member States shall transmit to the Commission (Eurostat) within the time limits given for each table. This Transmission Programme also entails various tables with data for the government sector. Table 7 covers the balance sheets showing financial assets and liabilities by sector, from which non-consolidated and consolidated government debt figures can be derived for the euro area. Government liabilities are further broken down by sub-sector, financial instrument and original maturity.

Various caveats in relation to these annual stock data have to be taken into account when compiling euro area aggregates. There are still derogations in place, which were granted to EU countries concerning the coverage, timeliness and breakdown of data included in Table 7. For the time being, only nine of twelve euro area countries compile and transmit financial balance sheet data to the Commission, while the data sets for Greece, Ireland and Luxembourg will become available first by September 2005.

The national government data, which are provided by nine euro area countries, are still incomplete, specifically related to the consolidated series. Consequently, the compilation of consolidated ESA95 debt is not yet feasible and, therefore, the derivation of the consolidating elements.

Accrued interest is not always treated in the same way. Some compilers add accrued interest to the underlying financial instrument, others include this debt component into other accounts payable, while others do not include it at all. Furthermore, not all countries compiling financial accounts apply the market valuation principle, which also complicates the compilation of ESA95 debt. Finally, the coverage of data referring to the debt categories not included in EDP debt seems to be rather incomplete.

Taking into account the shortcomings of the national ESA95 debt data, the compilation of ESA95 debt for the EMU is seen as preliminary. It is based on the available annual data sets for nine euro area countries supplemented by quarterly financial accounts and securities issues data available for Greece, Ireland and Luxembourg.

3.3 EDP debt versus ESA95 debt

The sum of debt liabilities recorded in the general government balance sheet under ESA95 differs from EDP debt in three aspects. While both debt concepts are based on the same delineation of the government sector, the instrument coverage, the treatment of accrued interest and the valuation methods applied diverge. To reconcile between EDP gross consolidated debt...
and ESA95 gross non-consolidated debt, a further step has to be made, the move from consolidated to non-consolidated data, which can only be done for the EDP debt, for which the necessary data sets are available (see also Table 3).

**Table 3**
Reconciliation between EDP debt and ESA95 debt by component

<table>
<thead>
<tr>
<th>EDP debt, consolidated</th>
<th>EDP debt, non-consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidating elements</td>
<td></td>
</tr>
<tr>
<td>ESA95 debt instrument coverage</td>
<td></td>
</tr>
<tr>
<td>Inclusion of accrued interest</td>
<td></td>
</tr>
<tr>
<td>Move from nominal to market valuation</td>
<td></td>
</tr>
<tr>
<td>ESA95 debt, non-consolidated</td>
<td></td>
</tr>
</tbody>
</table>

- **Instrument coverage**

The financial categories not considered in EDP debt but included in ESA95 debt are financial derivatives such as swaps and FRAs, insurance technical reserves, trade credit and other accounts payable.

Looking at the reconciliation between the two debt concepts, 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 4, this effect was 3.8% of GDP in 2002, which was mainly due to the inclusion of debt in form of trade credits and other payables, while debt in 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 mentioned above, accrued interest is either recorded with the underlying instrument or identified separately in ESA95 debt.

- **Accrued interest and market valuation**

While the instrument coverage effect can be isolated properly only the compound effect due to the inclusion of accrued interest and the application of market valuation 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 76.7% of GDP, so the compound interest accrued and valuation effect was 5.1% of GDP.
Chart 4 presents, together with EDP debt, ESA95 non-consolidated debt, which was 83.7% of GDP in 1995 and 80.5% of GDP in 2002. ESA95 non-consolidated debt was 11.5% of GDP higher than EDP debt in 2002. 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%). For the time being, no further split of the accrued interest and valuation effect can be provided.

Chart 4
EDP and ESA95 government debt
euro area, as a percentage of GDP, end of year

4. GOVERNMENT DEFICIT-DEBT ADJUSTMENT
EDP debt is general government gross debt as defined in the Maastricht Treaty for the EDP. It is the stock of the government’s outstanding debt measured at a point in time. EDP debt is mainly the result of the accumulation of deficits over time, but the relationship is not exact.
Moreover, the EDP deficit, plus the deficit-debt adjustment (DDA), equals the change in debt over a period of time, usually the year.

<table>
<thead>
<tr>
<th>EDP debt at the start of the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ EDP deficit</td>
</tr>
<tr>
<td>+ Deficit-debt adjustment</td>
</tr>
</tbody>
</table>
| = EDP debt at the end of the year.

Accordingly, the DDA is not just a residual; it can be defined in terms of specific components:

In ESA95, the net acquisition of financial assets minus the net incurrence of liabilities is net lending/net borrowing as reported in the financial account. This can differ from the net lending/net borrowing compiled in the capital account owing to imperfect data sources. Furthermore, transactions in liabilities can be divided into those that are EDP debt instruments and those that are not. The change in the balance sheet stocks of a financial instrument over a year is equal to financial transactions and the other flows during the year. Finally, the transactions and other flows in EDP debt instruments measured at market value, as in ESA95, differ from transactions in EDP debt instruments measured at face value.

Bringing these four components together refers to the relationship between the EDP deficit and the change in EDP debt:

<table>
<thead>
<tr>
<th>EDP deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Statistical discrepancy</td>
</tr>
<tr>
<td>- Net acquisition by government units of financial assets that are liabilities of other government units (consolidation of financial transactions)</td>
</tr>
<tr>
<td>+ Net acquisition of financial assets (ESA95 financial transactions)</td>
</tr>
<tr>
<td>- Net incurrence of liabilities that are not EDP debt instruments (ESA95 financial transactions)</td>
</tr>
<tr>
<td>+ Net increase in value of EDP debt instruments due to exchange rate changes</td>
</tr>
<tr>
<td>+ Increase in value of EDP debt instruments due to other volume changes</td>
</tr>
<tr>
<td>+ Market-to-face-value adjustment</td>
</tr>
<tr>
<td>= Net increase, measured at face value, in liabilities that are EDP debt instruments</td>
</tr>
</tbody>
</table>

(Change in EDP debt)

DDA figures are an indicator to monitor the reliability and consistency of the EDP deficit and debt data in national accounts. For instance, major statistical discrepancies between the measures of net lending/net borrowing derived from the capital and the financial account of the general government might be a reason to correct data gaps which are specifically identifiable. The data measuring the change in EDP debt and the DDA for the euro area are compiled and published by the ECB in its Monthly Bulletin, Table 6.3.
Chart 5 shows these figures, the change in EDP government debt and its two components, EDP deficit and DDA. Change in EDP government debt is mainly determined by the EDP deficit, while the DDA was rather small during the recent years.

**Chart 5**

*Change in EDP government debt*

Euro area, as a percentage of GDP, end of year

As indicated above, the DDA can be further broken down into its main components, which are the effects due to transactions in main financial assets held by government, due to valuation, due to other changes in the volume of assets and due to other components. The DDA was 0.4% of GDP in 2003. It resulted from rather small, but diverging effects.

5. **Net Debt**

5.1 **Government balance sheet**

The derivation of net debt requires the availability of stock data as presented in a government balance sheet according to the ESA95 methodology. Drawing up a balance sheet allows focusing on government net worth and its changes rather than on government deficit or debt. The basic principles of this approach are the following:
a) The government balance sheet is composed of three elements, on the assets side, the stock of non-financial assets and the stock of financial assets and, on the liabilities side, the stock of liabilities. The net worth of government is given as the balancing item between assets and liabilities. While the availability and valuation of financial assets and liabilities is rather straightforward, the appropriate collection and valuation of data on government non-financial assets is rather complex. For the time being, no data on government net worth are available for euro area countries. According to the revised ESA95 Transmission Programme such data they have to be provided in future on a voluntary basis.

b) Changes in the various items of the balance sheet can arise because of transactions, revaluations and other changes in the volume of assets;

c) EDP or ESA95 government debt figures are embedded as sub-sets of government liabilities based, respectively, on nominal or on market values as described above; and

d) Government net lending/net borrowing (deficit/surplus) equals the difference between (net) transactions in financial assets and in liabilities as reflected in the financial account or between government saving including net capital transfers and capital formation as reflected in the capital account. Net lending/net borrowing is generally different from a change in the government net worth because it includes only transactions like net capital formation of government, but it excludes valuation changes and other changes in the volume of assets. These components can be quite important, for example for countries that hold significant amounts of shares and other equity vis-à-vis corporations or parts of government debt denominated in foreign currency.

From the definition of government net worth it is clear that government debt can decrease even when net worth does not change. A decline in debt can be accompanied by a reduction in the stock of financial assets (privatisations) or by a decline in the stock of non-financial assets (if depreciation exceeds gross capital formation). Also a switch in the investment pattern of social security funds from private to government sector instruments would imply a decline in general government gross debt, but not in the general government net liabilities or an improvement in

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12 Net worth may be interpreted as a variant of Tobin’s Q. As defined by Tobin, Q is the ratio of the market value of the firm (equity plus debt) to the replacement cost of its tangible assets. For the government sector, debt is equal to its liabilities, in the absence of equity, and it corresponds to the numerator of Q. Tangible assets are used as the denominator of Q.

13 Australia and Canada publish general government balance sheets with estimates of the value of produced, non-produced and financial assets, of liabilities and of the net worth (defined as the difference between assets and liabilities). They are also provided for non-financial and financial corporations and for households (including non-profit institutions serving households).
government net worth. Hence, reductions in gross government debt are not necessarily associated with an improvement in the government budgetary position.

5.2 ESA95 government financial assets

For the time being, only stock data on government financial assets and liabilities are available. Using these data, ESA95 debt can be shown net of all or of certain financial assets. Government financial assets include mainly currency and deposits, loans owed to government, debt securities, shares and other equity, and other accounts receivable.

Financial assets held by euro area government were 26.8% of GDP in 2002, which was almost equal to the ratio observed in 1995, but higher for the years in between.

Chart 6
ESA95 financial assets held by government
euro area, as a percentage of GDP, end of year

The movements of the financial assets held by government were mainly determined by share price movements in that period (see Chart 6). The effect due to the net acquisition of shares and other equity was rather negligible in this context. The holdings of shares and other equity by government were 8.4% of GDP in 1995. It rose to 11.0% of GDP in 1999, but decreased
continuously to 7.7% of GDP in 2002. In addition, the holdings of currency and deposits, loans granted and other accounts receivable were between 5% and 6% of GDP in 2002, while holdings of debt securities counted 2% of GDP.

5.3 **ESA95 net debt positions**

Without stock data on non-financial assets, net debt positions may be seen as a proxy for government net worth (net financial assets). Accordingly, increases in net debt would deteriorate government net worth and vice versa. Subtracting government holdings of financial assets from gross debt derives net debt positions.

**Chart 7**

*ESA95 debt, gross and net*

euro area, as a percentage of GDP, end of year

Chart 7 exhibits 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. The second net debt position excludes all financial assets leading to a debt-to-GDP ratio of 53.7% in 2002, which was 26.8% lower than ESA95 gross non-consolidated debt and 15.3% lower than EDP debt.
Table 4 shows the available ESA95 debt components in 2002, gross and net and broken down by original maturity and financial instrument.

Table 4
ESA95 debt, gross and net
euro area, as a percentage of GDP, end of 2002

<table>
<thead>
<tr>
<th></th>
<th>ESA95 gross debt</th>
<th>Government financial assets</th>
<th>ESA95 net debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3=2-1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80.5</td>
<td>26.8</td>
<td>53.7</td>
</tr>
<tr>
<td><strong>Short-term</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currency and deposits</td>
<td>16.1</td>
<td>12.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Debt securities</td>
<td>4.2</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>1.3</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Other accounts</td>
<td>3.8</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td><strong>Long-term</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt securities</td>
<td>64.4</td>
<td>14.6</td>
<td>49.8</td>
</tr>
<tr>
<td>Shares and other equity</td>
<td>-</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>12.4</td>
<td>5.2</td>
<td></td>
</tr>
</tbody>
</table>

5.4 Changes in government debt

Changes in debt can be compared as compiled for EDP debt and ESA95 debt, gross or net. According to Chart 8, there are major differences between the three series measuring changes in debt.

Chart 8
Change in government debt, gross and net
euro area, as a percentage of GDP
Changes in ESA95 gross consolidated debt were always positive over the period from 1996 to 2002. Otherwise, gross ESA95 debt remained almost unchanged in 1999, while net debt decreased by 3% of GDP in the same year.

As shown in Chart 9, the linear relationship between changes in debt is most stringent between ESA95 gross and ESA95 net debt. It leads to the conclusion that these debt measures and their changes might be better indicators to monitor fiscal developments. How far, they can be used as proxies for net worth and its change is not easily to assess because no data on government non-financial assets are not yet available.

**Chart 9**
**Relationship between changes in EDP and ESA95 government debt and deficit**

*Euro area, as a percentage of GDP*

![Diagram](image-url)

6. **Conclusions**

In this paper, various fiscal policy measures for the euro area have been derived. Starting with the EDP related concepts, deficit, debt and their relationship to each other are still at the centre of discussion if evaluating fiscal policy stance in the EU countries and in the euro area. Furthermore, the links between the EDP and the corresponding ESA95 concepts of deficit and
debt have also been considered. As these measures are integrated parts of the ESA95, their relationship to each other is easy to assess.

Already available ESA95 financial balance sheet data allow deriving government debt positions net of financial assets, which might be seen as a proxy for government net worth. These measures as well as their changes might be used as additional information for fiscal policy analysis because of their inclusion of statistical information derived from changes in assets and liabilities due to transactions, revaluations and other flows. Nevertheless, for a comprehensive evaluation of government net worth and its changes stock data of government non-financial assets have to be included.

Compiling fiscal measures as described above do not take into account specific types of government liabilities. 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. Furthermore, 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.

Implementing such new proposals may improve the coverage of data for public corporations. Such data are necessary to compile public sector accounts necessary to derive corresponding measures. Extended measures refer to public sector deficit, debt and net worth, which also include, in a consolidated presentation, the deficit, debt and net worth of public corporations and general government.
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