Stock-flow adjustment for the Member States, the euro area and the EU, for the period 2017-2020

as reported in the October 2021 EDP notification

The main factors contributing to changes in government debt other than government deficit/surplus (stock-flow adjustment)

The stock-flow adjustment (SFA) explains the difference between the change in government debt and the government deficit/surplus for a given period. Although SFAs generally have legitimate explanations, Eurostat closely monitors them during quality checks of data for the excessive deficit procedure (EDP)¹, to ensure adherence to statistical rules and consistency across the reported data.

Conceptually, the stock-flow adjustment can be broken down into the following categories: net acquisition of financial assets, debt adjustment effects and statistical discrepancies. The main purpose of this note is to explain the individual elements of the SFA and analyse their patterns and trends.

Countries with an exceptionally large SFA in absolute terms deserve particular attention, even though these values normally have appropriate explanations. Close consideration should also be given to large but offsetting values.

Figure 1: Government deficit/surplus (reversed sign), change in government debt and stockflow adjustment as a percentage of GDP: 2020 figures



Source: Eurostat (online data code: gov_10dd_edpt3)

Figure 1 shows the 2020 SFA for each Member State, together with the government deficit/surplus (reversed sign) and the change in government debt, expressed as a percentage of GDP. Thirteen countries exhibit an SFA larger than 3% of GDP in absolute terms in 2020. The twelve countries

¹ Council Regulation 479/2009 requires the prompt and regular reporting of deficit and debt data by Member States to Eurostat. For definitions of government deficit and debt, and of consolidation, see the Methodological Annex.

subject to the largest positive SFA values expressed as a percentage of GDP are Spain (+3.0%), Finland (+3.5%), Germany (+3.6%), Lithuania (+4.0%), Slovenia (+4.4%), Portugal (+4.4%), Estonia (+4.6%), Slovakia (+5.1%), Poland (+5.4%), Hungary (+7.2%), Denmark (+8.5%), and Cyprus (+12.4%). The largest negative SFA expressed as a percentage of GDP is reported by Greece (-4.0%).

Introduction

It is widely known that deficits contribute to an increase in debt levels, while surpluses reduce them. However, as figure 1 shows, the change in government debt also reflects other elements. A positive SFA means that the government debt increases more than the annual deficit (or decreases less than implied by the surplus). A negative SFA means that the government debt increases less than the annual deficit (or decreases more than implied by the surplus).

SFAs have legitimate accounting explanations. The change in the stock of debt does not originate only from the deficit but could be affected, for example, by loans granted by government or by equity injections into corporations, which do not appear in the deficit figures. The importance of the SFA has been emphasised many times, since efficient statistical monitoring of fiscal performance requires a good understanding of the relationship between the two key fiscal indicators – government deficit and debt. Closely monitoring SFAs can also highlight data quality problems: for example, governments might have an incentive to understate their deficits by reporting transactions as part of the SFA, in particular during times of economic turmoil, such as the one caused by the COVID-19 pandemic.



Figure 2: Evolution of change in debt and annual deficit in the EU as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

Figure 2 shows the evolution of the EU SFA (measured as the gap between the two lines): -0.06% of GDP in 2017, 0.47% of GDP in 2018, 0.12% of GDP in 2019 and 2.57% of GDP in 2020. The graph reflects the surge of government debt in the EU for 2020 resulting from the COVID-19 crisis, well above the levels needed to finance the significantly increased deficits reported by Member States.

Table 1 shows the SFAs for the years 2017-2020, as a percentage of GDP. The last column shows the average SFAs over the last four years, which makes it possible to compare the size of the adjustments reported in 2020 with those of the other years, for each country.

While at least half of the annual SFAs reported by countries for 2017-2019 were positive, all but four

countries reported positive SFAs in 2020.

In 2020, large (exceeding 4% of GDP) **positive** SFAs were reported by Cyprus (12.4% of GDP), Denmark (8.5% of GDP), Hungary (7.2% of GDP), Poland (5.4% of GDP), Slovakia (5.1% of GDP), Estonia (4.6% of GDP), Slovenia and Portugal (4.4% of GDP). One large **negative** SFA, that is, in absolute terms, above the level of -4% of GDP, was reported by Greece in 2020 (-4.0%).

Over the years 2017-2019, the largest **positive** SFAs were reported by Greece (+10.5% of GDP) and Cyprus (7.8% of GDP) in 2018. Large **positive** SFAs, exceeding 4% of GDP, were also reported by Denmark and Lithuania for 2019, as well as Luxembourg for 2017 and 2019. No large **negative** SFAs, exceeding - 4% of GDP, were observed for the period 2017-2019.

While annual SFAs measured in absolute values exceeded 1% of GDP for thirteen Member States only in 2017, more than twenty Member States reported SFAs exceeding this threshold for 2020.

For four Member States in 2017 and 2018, three in 2019, and sixteen in 2020, the SFAs exceeded 2% of GDP, in absolute values.

	2017	2018	2019	2020	average
EU	-0.1	0.5	0.1	2.6	0.8
EA	-0.1	0.4	0.1	2.3	0.7
BE	-0.1	0.3	-0.3	1.4	0.3
BG	-0.3	0.4	1.9	0.6	0.7
CZ	1.4	0.6	0.4	1.6	1.0
DK	1.9	-0.2	4.6	8.5	3.7
DE	-0.2	0.5	1.0	3.6	1.2
EE	-0.5	-0.7	1.0	4.6	1.1
IE	-0.1	1.6	0.0	-1.2	0.1
EL	2.0	10.5	-0.9	-4.0	1.9
ES	0.5	-0.1	-1.6	3.0	0.4
FR	-0.1	0.1	-0.4	2.8	0.6
HR	1.1	0.5	1.9	2.4	1.5
IT	0.1	0.7	0.0	0.3	0.3
CY	-1.5	7.8	0.0	12.4	4.7
LV	0.2	0.2	0.8	0.6	0.5
LT	3.0	-2.1	5.0	4.0	2.5
LU	4.2	2.8	4.5	-0.6	2.7
HU	0.7	1.7	0.3	7.2	2.5
MT	2.7	1.5	0.9	-0.1	1.2
NL	-1.1	-0.5	0.3	0.9	-0.1
AT	-2.5	-1.0	-0.6	1.0	-0.8
PL	-1.6	1.1	-0.3	5.4	1.1
PT	-2.0	0.7	0.4	4.4	0.9
RO	-0.8	0.2	-0.3	2.6	0.4
SI	0.3	1.5	-0.6	4.4	1.4
SK	0.3	-0.1	-0.4	5.1	1.2
FI	-0.2	-0.4	0.5	3.5	0.9
SE	1.8	0.7	-1.7	1.5	0.6

Table 1: Stock-flow adjustment, as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

The following sections present the individual components of the SFAs, focusing at the same time at large transactions reported by the Member States.

Components of the stock-flow adjustment – factors contributing to the general government debt

The SFA is made up of 17 elements. This note presents them grouped into main categories.

Table 2 presents the SFA elements, as reported to Eurostat by Member States, showing EU figures for 2017-2020. At the end of this document, table 3 details the SFA of each Member State for each year over the period 2017-2020. Its columns are numbered and cross-references to the data are included throughout the text in brackets.

The starting point of the analysis is the *Net lending/net borrowing*, or *Surplus/deficit level* (with reverse sign: a deficit is displayed with a positive sign, a surplus with a negative sign) and its contribution to the change in general government debt.

The first SFA category is called **Net acquisition of financial assets**. These adjustments appear here because financial transactions in assets are not contributing to the deficit, but they lead to increases or decreases in the stock of debt.

A second category of SFAs, called *Adjustments*, includes three sub-categories.

- 1. The first one includes transactions in those liabilities that are excluded from the government debt definition (*Financial derivatives (F.71)*, *Other accounts payable (F.8) and Other liabilities (F.1, F.5, F.6 and F.72)*).
- The second sub-category comprises valuation effects, as shown in the next three lines (*Issuances above/below nominal value*, *Difference between interest (D.41) accrued and paid* and *Redemptions of debt above/below nominal value*), reflecting the fact that government debt, defined in Council Regulation 479/2009, is measured at face value.
- 3. The third sub-category includes the *Appreciation/depreciation of foreign-currency debt*, reflecting the impact of changes in exchange rates on those government debt components that are denominated in foreign currencies, taking into account hedging activities. Finally, other changes in volume (*Changes in sector classification (K.61)*, and *Other volume changes in financial liabilities (K.3, K.4, K.5)*) mainly arise from the reclassification of units inside or outside general government or other rare cases of extinguishment of debt that are not reflected in the deficit/surplus.

The third category contains the *Statistical discrepancies*, which reflect differences arising from the diversity of data sources and might also indicate problems with the quality of data.

As it can be seen in table 2, for the EU (and to a lesser degree the euro area or EA) the change in general government gross debt is additionally explained by so-called *aggregation effects*.

EU - 2020							
October 2021 EDP notification	2017	2018	2019	2020			
Net borrowing(+)/lending(-)(B.9) of general government (S.13)*	103 276	51 542	76 499	922 548			
Net acquisition (+) of financial assets (1, 2)	88 484	85 187	58 724	430 783			
Currency and deposits (F.2)	59 953	46 107	1 981	278 624			
Debt securities (F.3)	- 1 253	- 3 501	11 546	- 9 200			
Loans (F.4) (1, 2)	717	- 1 967	- 3 900	73 128			
Increase (+)	76 862	62 223	73 789	136 518			
Reduction (-)	- 76 145	- 64 190	- 77 692	- 63 390			
Short term loans (F.41), net	524	994	492	3 185			
Long-term loans (F.42)	193	- 2 961	- 4 391	69 943			
Increase (+)	69 480	57 382	68 689	120 778			
Reduction (-)	- 69 287	- 60 343	- 73 082	- 50 835			
Equity and investment fund shares/units (F.5)	5 696	19 102	22 033	26 267			
Portfolio investments, net	17 725	29 819	19 522	28 977			
Equity and investment fund shares/units other than portfolio investments	- 12 027	- 10 718	2 511	- 2 711			
Increase (+)	45 580	40 055	65 689	98 211			
Reduction (-)	- 57 609	- 50 773	- 63 178	- 100 922			
Financial derivatives (E.71)	- 9 507	- 5 820	665	- 18 504			
Other accounts receivable (F.8)	32 683	31 227	26 115	80 044			
Other financial assets (E.1, E.6)	195	39	283	425			
Adjustments (1)	- 102 423	- 20 501	- 38 769	- 70 331			
Net incurrence (-) of liabilities in financial derivatives (F.71)	2 217	14 828	6 778	12 629			
Net incurrence (-) of other accounts payable (F.8)	- 73 363	- 46 408	- 23 926	- 64 089			
Net incurrence (-) of other liabilities (F.1, F.5, F.6 and F.72)	- 5 086	- 3 398	- 3 743	- 15 168			
Issuances above(-)/below(+) nominal value	- 32 899	- 24 350	- 54 299	- 74 009			
Difference between interest (D.41) accrued(-) and paid(+)	25 689	23 331	27 898	29 054			
Redemptions/repurchase of debt above(+)/below(-) nominal value	3 924	7 024	6 330	9 265			
Appreciation(+)/depreciation(-) of foreign-currency debt (2) (3)	- 17 481	8 873	5 765	- 884			
Changes in sector classification (K.61) (+/-)	826	173	- 3 485	34 418			
Other volume changes in financial liabilities (K.3, K.4, K.5)(-)	- 6 251	- 574	- 87	- 1 547			
Statistical discrepancies	6 653	- 1 194	- 3 130	- 16 896			
Difference between capital and financial accounts (B.9-B.9f)	3 527	- 506	- 1 738	- 9 078			
Other statistical discrepancies (+/-)	3 126	- 688	- 1 392	- 7 818			
Change in general government (S.13) consolidated gross debt (1, 2) ** [the last ite	95 991	115 033	93 325	1 266 102			
Memorandum item [1=2+3]: overall aggregation effect**		- 18 788	- 2 702	- 22 313			
Memorandum item [2]: consolidation of intergovernmental lending (IGL) effect**		- 267	2 225	884			
Memorandum item [3]: forex aggregation effect**		- 18 521	- 4 928	- 23 198			
Memorandum item [4]: Change in the stock of aggregated (consolidated for IGL)		06 244	00 622	1 2/2 700			
general government debt**		90 244	90 023	1 243 700			
Memorandum item [5]: Stock of aggregated (consolidated for IGL) general government	10 626 650	40 700 00 4	10 000 517	40.067.000			
debt**	10 030 050	10 732 894	10 823 517	12 067 306			
(1) Consolidated within general government of a Member State [but not for intergovernmental lending between the EU-27 Member States].							

Table 2: Stock-flow adjustment items for the EU, in million euro, 2017-2020

(1) Consolidated within general government of a Member State [but not for intergovernmental lending between the EU-27 Member States].
(2) Intergovernmental lending (IGL) not consolidated in this line.
(3) Due to exchange-rate movements, taking into account hedging activities.
**Please note the sign convention in this table for net borrowing / net lending: a positive entry reflects a deficit, a negative entry reflects a surplus.
** Aggregated data for EU-27 are calculated from the nominal figures sent by Member States to Eurostat, using an average exchange rate in the core table (for transactions and other adjustments), but using an end of period exchange rate for the memorandum items [4] and [5], as it is appropriate for conversion of the end-year debt stock. As a consequence, the aggregation of "Change in general government (S.13) consolidated fors Sdet" for 27 EU Member States [the last item of the core table] is not the same as the "change in the stock of aggregated (consolidated for IGL) general government debt" [memorandum item [4]], for the EU-27 aggregate, owing to: i) the impact of intergovernmental lending [memorandum item [2]] and ii) different annual exchange rates used (for conversion of flows and for stocks), when the data are converted in euro [memorandum item [3]].
It should be noted that the core table does not consolidate intergovernmental lending (IGL), neither for the item "Loans (F.4)" [assets] nor "Change in general government (S.13) consolidated gross debt".

Source: Eurostat

Net lending (+) / net borrowing (-) (B.9)

The basic factor contributing to the change in government consolidated gross debt is generally the deficit or surplus of the general government sector (column (1) in table 3). Figure 3 illustrates deficits/surpluses in 2017-2020, sorted in descending order of the deficit level in 2020.

In 2020, all countries reported a government deficit whilst the largest ones, expressed as percentage of GDP, were recorded in Spain (-11.0%), Greece (-10.1%), Malta (-9.7%), Italy (-9.6%), Romania (-9.4%), France (-9.1%) and Belgium (-9.1%).

All Member States except Denmark and Sweden had a deficit equal or higher than 3% of GDP in 2020.

Bulgaria, Czechia, Denmark, Germany, Greece, Croatia, Lithuania, Luxembourg, Malta, the Netherlands, and Sweden had reported surpluses in each of the three years 2017-2019.

In 2020, government deficit deteriorated significantly in the euro area (to -7.2% of GDP) as well as in the EU (to -6.9% of GDP). The EU deficit remained slightly lower than that of the euro area throughout the reporting period (2017-2020).

Over the period 2017-2019, Romania (-4.4% of GDP in 2019), Cyprus (-3.5% of GDP in 2018), France (-3.1% of GDP in 2019 and -3.0% of GDP in 2017), Spain and Portugal (-3.0% of GDP in 2017) reported the highest deficits.

During the period 2017-2019, government deficit to GDP ratio had slightly improved from -0.9% in 2017 to -0.6% in 2019 in the euro area, whereas in the EU it had improved from -0.8% to -0.5%.

Figure 3: Net lending (+)/net borrowing (-) as a percentage of GDP, 2017-2020, in descending order of the deficit level in 2020



Net acquisition of financial assets

The net acquisition of financial assets is generally the main factor in the SFA. It reflects the acquisition less disposal of financial assets held by the general government sector in the form of *Currency and deposits (F.2), Debt securities (F.3), Loans granted by government to non-governmental units (F.4), Equity and investment fund shares/units (F.5), Financial derivatives (F.71), Other accounts receivable (F.8) and Other financial assets (Monetary gold and SDRs (F.1) and Insurance technical reserves (F.6)).*

Transactions in financial assets are reported on a consolidated basis, i.e. excluding transactions between government units, given that government debt is consolidated within general government. The lending from one unit of government to another is eliminated and is shown neither as acquisition of assets nor as increase in debt. Similarly, the acquisition of government bonds by government units is not shown as acquisition of assets, but as reduction in consolidated debt. The amounts of transactions between sub-sectors can be observed when information is provided at the level of each sub-sector of general government. Such information on SFAs by sub-sector is accessible on the Eurostat website.

Transactions in financial instruments, such as sales of shares, have no direct impact on government debt, because they lead to changes in holdings of other types of financial assets, normally currency and deposits. However, there will be a subsequent impact on the debt if government uses the proceeds to repay its debt.

Changes in market value (e.g. holding gains/losses due to price changes, both realized and unrealized) of financial assets owned by general government are not included here but in the revaluation accounts. These have an impact neither on government deficit nor on the change in government debt.

Figure 4 shows the evolution of the components of the net acquisition of financial assets for the EU over the years 2017-2020. In the years 2017-2020, most components contributed positively to the net acquisition of financial assets, with the exception of *Financial Derivatives (F.71)* that had a noticeable negative impact in all years concerned except in 2019.

The contribution of each component varied significantly over the entire reporting period. While *Currency and deposits* (F.2) already contributed significantly to the SFAs for the years 2017-2018, the *Currency and deposits* (F.2) input to the SFA surged to unrivalled levels in 2020, indicating that significant amounts of cash were accumulated during the year and suggesting that many member states borrowed funds anticipating liquidity needs.

Another major change in the input to the SFA in 2020 concerns the *Other accounts receivable (F.8)* contributing positively to the net acquisition of financial assets and reflecting to a large extent tax accruals and deferral schemes implemented in many member states as a result of the COVID-19 pandemic.

Moreover, Figure 4 shows a major net increase of financial assets for the EU pertaining to loans (F.4) reflecting policy measures aiming at providing public financing to corporations in the context of the pandemic.

The net acquisition of *Equity and investment fund shares/units* (F.5) slightly increased in 2020. The effect of *Other financial assets* (F.1 and F.6) on the net acquisition of financial assets was not significant whereas *Financial derivatives* (F.71) contributed negatively again in 2020.



Figure 4: Net acquisition of financial assets for the EU (in million EUR), 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

In principle, the information on net acquisition of financial assets must be coherent with financial accounts data published by Member States and reported to Eurostat under the ESA 2010 transmission programme. However, some deviations may appear.

The other sections of this note are devoted to major SFA elements, examining data by country and focusing on large values. For analytical purposes, the Other accounts receivable (F.8) item is analysed together with Net incurrence of other accounts payable (F.8).

Currency and deposits (F.2)

The Currency and deposits (F.2) position (column (5) in table 3) mainly reflects movements in central government deposits with banks, notably with central banks, which can fluctuate substantially from one year to another, in particular due to treasury operations (including repurchase agreements). However, other government units' (e.g. local government, social security funds) transactions in currency and deposits are also reflected here.

The level of deposits tends to increase along with economic growth. Transactions in Currency and deposits (F.2) might also be influenced from one year to the next by very large operations that lead to large cash inflows or outflows in a given year. For example, a large bond issuance might increase the deposits of government if the receipts from the issuance are not immediately used for another purpose like bond redemption or government spending, but are temporarily kept in the bank.

Large accumulations of Currency and deposits (F.2) might reflect governments' measures in the context of a financial crisis (e.g. reinforcement of cash reserves by issuing bonds or by taking loans).

In 2020, almost all countries reported an upsurge in Currency and deposits (F.2), except Greece, Malta, Luxembourg and Ireland. For the current reporting year, the largest positive values were reported by Cyprus (+12.7% of GDP), Slovenia (+6.5% of GDP), Finland (+5.3% of GDP), Slovakia (+5.2% of GDP), Portugal (+4.8% of GDP), Hungary (+4.6% of GDP), and Lithuania (+4.2% of GDP).

The accumulation of cash suggests that numerous countries have borrowed large amounts of funds, mainly through the issuance of bonds, in order to safeguard their liquidity needs in the context of the pandemic and to take advantage of the low or even negative interest rates. Other causes may also have contributed to the increase of *Currency and deposits (F.2)*, such as borrowing from the EU. In the case of Finland, the accumulation of cash originated mainly in the social security funds, in particular for the employment pension schemes.

On the contrary, noticeable negative input to the SFA from the *Currency and deposits (F.2)* were reported by Greece (-5% of GDP) and Luxembourg (-1.7% of GDP), reflecting drawings on the cash that had been accumulated in the past years. Moreover, Malta (-1.8% of GDP) reported reductions in the Government's main public account at the Central Bank of Malta and the deposits held by the National Development and Social Fund.

The relatively high positive values for Luxembourg and Lithuania in 2019 were mainly related to the issuance of debt securities, while for Cyprus, the large positive adjustment related to the redemption of loans assets and the accumulation of cash by the Social Security Funds.

The relatively high negative values for Denmark in 2018 and 2019 are due to government purchase of bonds leading to a decrease in currency and deposits and a significant increase in debt securities (F.3, see below). Another significant increase in *Currency and deposits (F.2)* was also reported by Greece (2018) and was mainly due to cash inflows from the disbursement of the last ESM loan tranche.

No unusually large negative values were reported for 2017 and 2018.

Figure 5: Currency and deposits (F.2) as a percentage of GDP, 2017-2020



Source: Eurostat (online data code: gov_10dd_edpt3)

Debt securities (F.3)

Debt securities (column (6) in table 3) mainly reflect net purchases by government (predominantly asset-rich social security funds) of bills, notes, bonds or preference shares issued by financial institutions, non-financial corporations or non-residents (including foreign governments). However, some large flows of social security funds do not appear here, for example if they invest primarily or

exclusively in government securities, because these transactions are consolidated within the general government sector. This item does not include transactions relating to derivatives, such as swaps, futures and options, which are reported under the separate item *Financial derivatives* (F.71) (column (17) in table 3).

Since 2012, this item (F.3) also includes the notes issued by the European Stability Mechanism (ESM) or the European Financial Stability Facility (EFSF). The ESM lending in the form of provision of such notes appears as acquisition of debt securities, together with an increase in debt. A disposal of debt securities is recorded later on, when the Member State decides to use the notes, for instance in a recapitalisation exercise, or to return them to the ESM (in that latter case, the Member State debt also decreases).

Figure 6 shows a marked dispersion across Member States for this item. Many Member States report hardly any acquisition of debt securities, including in 2020, with the exception of a few countries like Luxembourg.

The positive value for Luxembourg in 2020 results from the investments made by the social security funds².

In Finland, the five largest employment pension schemes recorded negative net transactions for debt securities in 2019 and 2020 that were partly compensated by net acquisitions in portfolio investments (F.5, see below).

Denmark reported sizeable positive values for 2018 and 2019 following government purchase of bonds. The positive value for Portugal in 2019 is due to significant investments made by the social security funds subsector, into debt securities issued by non-resident units. The large positive value for Sweden in 2017 was due to significant investments into debt securities by the central government and the social security funds subsectors.



Figure 6: Debt securities (F.3) as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

Loans (F.4)

This item (column (7) in table 3) comprises loans to non-government units only, since the figures in this table are consolidated. It predominantly includes lending to public corporations, foreign governments or households (students, etc.). The value of loans grows with increased lending and decreases with loan repayments and loan cancellations. Some loans might be converted into capital (recorded as capital transfers or equity injections), which would imply a further reduction in this item. Loans granted by government with little expectation of repayment at inception are to be recorded in national accounts as capital transfers (thus affecting the deficit) and are therefore not reported here.

EDP tables require Member States to provide information on the distribution of government's shortterm loan (column (10) in table 3) and long-term loan (column (11) in table 3) assets. According to ESA 2010, the maturity of short-term loans is one year or less, while the original maturity of long-term loans is more than one year. All Member States provide these items. The data is shown in table 3.

In 2020, a number of countries have reported a positive SFA input for *Loans (F.4)*, following the financial support provided directly by governments or indirectly by other units acting on behalf of governments (these transactions are rearranged and reflected in government accounts) to entities in financing need due to the adverse effects of the COVID-19 pandemic. Government lending was notable for Denmark, Greece, Poland, Germany, Sweden and Estonia and on average larger than in previous reported periods in the case of other countries like Latvia, Hungary and the Netherlands. These loans are generally long-term. In the case of Greece, Government has set up a scheme for repayable advances, where some amounts will not have to be repaid. The part to be repaid has been recorded as a loan in national accounts, whereas the part not to be repaid has been recorded as a capital transfer.

The negative 2020 figure for *Loans (F.4)* SFA for Cyprus reflects the impairment of the loan portfolio belonging to an asset management company classified in general government.

Cyprus reported the largest increase in *Loans (F.4)* in 2018, which is explained by the acquisition of a loan portfolio from a failed bank by an asset management company classified in general government. The relatively high negative value for Cyprus in 2019 is due to the redemption of loans pertaining to a defeasance structure, whereas the large negative values reported by Finland for 2017-2018 are due to repayments of loans related to an export credit-refinancing programme.



Figure 7: Loans (F.4) as a percentage of GDP, 2017-2020

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Source: Eurostat (online data code: gov_10dd_edpt3)

Equity and investment fund shares/units (F.5)

The item *Equity and investment fund shares/units (F.5)* (column (14) in table 3) captures acquisitions less disposals of equity in corporations by government units, divided into portfolio investments (column (15) in table 3) and non-portfolio investments (column (16) in table 3). The latter may reflect privatisation proceeds, super-dividends, or equity injections in public corporations among others. Figure 8 presents these transactions on a net basis.



Figure 8: Equity and investment fund shares or units (F.5) as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

Decreases in *Equity and investment fund shares/units (F.5)* may mirror privatisation proceeds (including privatisations conducted by special privatisation agencies classified inside general government). Decreases may also result from the application of the so-called "super-dividend test", which prescribes that distributions (to their owners) by public corporations in excess of their operating profit (i.e. excluding holding gains/losses) have to be recorded as financial transactions (withdrawal of equity) rather than government revenue (dividends). Such reclassifications are carried out by many Member States and can concern distributions by central banks.

Increases in *Equity and investment fund shares/units (F.5)* may relate to equity injections by government (generally in the form of cash provided by government) to specific public corporations and quasi-corporations where government is acting similarly to a private investor and expects a market return on invested funds. Part of the increase in *Equity and investment fund shares/units (F.5)* reflects Member States' injections in the European Stability Mechanism and in international organisations, as payments of the paid-in capital are considered equity.

Equity injections create a financing need and therefore may lead to an indirect increase in government debt, whilst proceeds from privatisations and equity disposals can finance the Maastricht debt redemptions.

The item *Equity and investment fund shares/units (F.5)* also captures portfolio investments in the form of purchases of quoted shares on the market or of mutual fund shares made by some

government units, notably asset-rich social security funds, such as in Luxembourg and Finland. Placements in money market mutual funds are also reported here, in spite of being close substitutes for bank deposits.

Portfolio investments represent holdings of shares, which, unlike direct investment, do not entail influence over, or control of the issuer by the investor. In line with international best practice, this means that the investor holds less than 10% of the total shares of the issuer.

The increase in equity in 2020 for Sweden is mainly due to the acquisition of equity in a state owned company involved in providing loans to corporations with a growth potential and assisting them in their development. Denmark also reported the acquisition of equity in the Danish Growth Fund (Vækstfonden) and in a company involved in the distribution of gas. The increase in portfolio investments observed in 2020 in Denmark mainly reflects acquisition of quoted shares or mutual funds shares by the social security funds.

The outsized equity acquisitions reported by Finland (2017-2020) are mainly due to portfolio investments placed by the social security funds subsector and reclassifications of entities into the general government sector. The ones by Luxembourg represent portfolio investments of the social security subsector (particularly in 2018 and 2019) and those of Malta (particularly in 2017) relate, inter alia, to government's equity injections in a development bank.

In recent years, many EU governments have reduced their equity holdings by unwinding the support measures to banks provided during the financial crisis (through privatisation, redemptions and conversions of preference shares and equity withdrawals). The negative value reported by Greece in 2018 was due to an exchange of preference shares subscribed during the previous financial crisis for bonds. The large decrease in 2017 for Ireland was caused by the sale of government holdings in financial institutions, while the relatively large decrease in 2019 was due to a net reduction in the holdings of investment fund shares and the withdrawal of equity from the Central Bank following the payment to the Exchequer of a super-dividend.

The decrease in 2017 for Latvia is due to a capital reduction in a public non-financial corporation while the ones in 2018 and 2020 for Slovenia are resulting from the privatisation of financial institutions.

Adjustments

Other accounts receivable (F.8), Net incurrence of other accounts payable (F.8) and Financial derivatives (F.71)

Whereas public accounts or budget recordings are often cash based (or partly cash based) in the EU, ESA 2010 follows the accrual principle, namely: recording transactions when the obligation to pay arises, not when the payment is actually made. Consequently, the impact on the financing needs of government does not directly arise from the deficit, as government revenue can be cashed or government expenditure can be settled in different accounting periods than the economic transaction itself. Thus, two items have to be added in the transition from the deficit to the change in government debt: *Other accounts receivable (F.8)* and *Net incurrence of other accounts payable (F.8)* (columns (18) and (22) in table 3).

Other accounts receivable (F.8) mainly include receivables of taxes and social contributions, as well as amounts concerning EU transactions (amounts paid by government on behalf of the EU but not yet reimbursed by the EU), trade credits and advances (e.g. advances for future acquisition of goods, such as military equipment) and, on rare occasions, amounts for wages or benefits paid one month in advance. The value of Other accounts receivable (AF.8) on the government balance sheet tends to increase over time because of nominal GDP growth.

By the same token, entries in *Net incurrence of other accounts payable (F.8)* include (among others) prepayments for licences (notably mobile phone spectrum licences, which are recorded as government revenue only when they are useable), trade credits granted by government suppliers, as well as the grants received from the EU but not yet paid to the final beneficiary or tax refunds not yet settled.





Source: Eurostat (online data code: gov_10dd_edpt3)

Figure 9 shows the net amount of other accounts receivable/payable reported by Member States for the years 2017-2020. The net amounts should be interpreted with care since they may hide the reporting of significant contributions of *Other accounts receivable (F.8)* and *Net incurrence of other accounts payable (F.8)* of opposite signs. This was particularly the case in 2020 when many countries were affected by large increases in receivables due, for example, to yet unpaid taxes or tax deferral schemes, and by the accumulation of payables pertaining to COVID-19 related expenditure not yet settled.

The 2020 positive net figures for Denmark, Malta and the Netherlands are largely due to increase in taxes receivables. The 2020 negative net adjustment for Spain derives from the re-classification of a unit into government. The noticeable negative net adjustments for Austria and Slovenia in 2020 mainly relate to expenditure incurred in the context of COVID-19 policy measures whereas, for Estonia, the adjustment relates mostly to payables vis-à-vis the European Union.

The negative figure reported by Cyprus for 2019 was caused by the recording of a payable tax credit to a private bank. The large positive value for the same year for Bulgaria resulted from advances paid for the future acquisition of military equipment, whereas for Denmark, the large positive adjustment is mainly due to increase in tax receivables.

Member States also provide supplementary information on *Other financial assets (F.1, F.6)* and *Net incurrence of other liabilities (F.1, F.5, F.6* and *F.72)* (columns (19) and (23) in table 3). These two items are not shown in this section due to their relatively small size (usually below 0.3% of GDP).

Government entities, notably Treasuries, may carry out operations in financial derivatives, such as swaps, futures and options, with the aim to reduce risks related to their debt instruments and for liquidity management purposes. The cash flows related to those operations are recorded in the financial accounts, without influencing the deficit. Financial derivatives liabilities are excluded from government debt (except for off-market swaps, which lead to entries under loans). Individual values are shown in column (21) in table 3. Operations related to *Financial derivatives (F.71)* are not included in figure 9, even though for some countries, such as Sweden and Finland, this component of the SFA might not be negligible as the 2020 figures show.

Valuation effects

These items relate to the fact that government debt is carried at face value.

Governments routinely issue bills, notes and bonds below or above their face value (face value = par value), often in the form of fungible bonds or zero coupon bonds. When the face and issuance values differ, this affects EDP figures. Since government debt must be recorded at face value but the proceeds entering *Currency and deposits (F.2)* correspond to the issue value, the difference must be recorded as *Issuance above(-)/below(+) par* (see column (24) in table 3). Hence, the difference, which has the economic nature of "interest", is recorded as government expenditure not at time of issuance, but only gradually over time. Recently, an increasing number of Member States issued their debt above par.

Similarly, an adjustment must be made in the case of early redemption, when government buys back issued bonds, or when a government unit purchases bonds issued by another government unit. The difference between the repurchase value and the face value is presented in the column *Redemptions of debt above* (+)/below (-) nominal value (column (26) in table 3).

Under ESA 2010, government expenditure on interest should be spread over time, in line with the accrual principle, whereas the cash impact occurs only when interest is actually paid. In addition, interest accrued is excluded from the stock of government debt. The item *Difference between interest* (*D.41*) accrued (-) and paid (+) (column (25) in table 3) addresses these two issues. As this item also captures the spreading over time of the premium or discount at issue, positive values may reflect the accrual impact of large amounts of bonds issued in the past at a premium. This effect is particularly sizeable for Portugal in 2020.

Figure 10 shows, by country, the difference between interest (D.41) accrued and paid for the whole

reporting period 2017-2020, as a percentage of GDP. Under ESA 2010, this item no longer includes any adjustments for payments on swaps and forward rate agreements, because these are now recorded as financial transactions also for EDP purposes.

Figure 10: Difference between interest (D.41) accrued (-) and paid (+) as a percentage of GDP, 2017-2020



Source: Eurostat (online data code: gov_10dd_edpt3)

For Greece, the values reported under the item *Difference between interest (D.41) accrued (-) and paid (+)* were significant for the reporting period 2017-2020. The deferral of interest payments on EFSF loans granted to Greece in the context of the second economic adjustment programme led to significant negative adjustments in the four years reported. In addition, 2017 and 2018 were affected by a bond exchange operation undertaken at the end of 2017. In 2017, the accrued coupon of the debt repurchased was paid in cash, leading to large positive adjustments offsetting the deferral of interest payments. On the contrary, the partial coupon deferral resulted in additional negative adjustments in 2018.

Appreciation/depreciation of foreign currency debt

When government issues debt denominated in a foreign currency and not hedged by derivatives, any subsequent depreciation or appreciation of the national currency leads to changes in debt without an impact on the deficit/surplus (shown in column (27) in table 3). Negative entries (reduction in debt) reflect appreciation of the national currency and positive entries (increase in debt) reflect depreciation of the national currency. In addition, at the time of redemption of the hedged debt, the final gain or loss on the instruments is presented under this adjustment entry.

It could be noted from figure 11 that some Member States have substantial amounts of debt denominated in foreign currency, mostly in euro (countries not in the euro area), U.S. dollars or Special Drawing Rights (SDRs). Noticeable depreciation/appreciation of foreign currency debt was observed for Hungary, Poland, Croatia, Lithuania, as well as for Sweden and Denmark in 2020.

The adjustments presented in figure 11 also reflect fluctuations in the value of the IMF's programme loans to EU countries, as well as some bilateral loans granted in foreign currency.



Figure 11: Appreciation/depreciation of foreign currency debt as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

Other changes in volume: Changes in sector classification (K.61) and Other volume changes in financial liabilities (K.3, K.4, K.5)

It might happen that an institutional unit, which was classified outside (inside) government, is reclassified inside (outside) government. As a result, the debt of the reclassified unit and its claims against government units need to be taken into account in the compilation of the government debt data. These impacts are commonly shown under *Changes in sector classification (K.61)* (column (28) in table 3).

Figure 12 shows the aggregate impact of both *Changes in sector classification (K.61)* and *Other volume changes in financial liabilities*, such as changes caused by catastrophic losses (K.3), uncompensated seizures (K.4) and other changes in volume not elsewhere classified (K.5).

The sizeable positive entry for Spain in 2020 is related to the sector reclassification of SAREB, a unit created in 2012 to assist the restructuring and recapitalisation of the Spanish banking sector.



Figure 12: Other changes in volume as a percentage of GDP, 2017-2020

Source: Eurostat (online data code: gov_10dd_edpt3)

Statistical discrepancies

Finally, *Statistical discrepancies* (column (30) in table 3) reflect differences arising from the diversity of data sources and might indicate problems with the reliability of data.

The government sector accounts in national accounts (ESA 2010) are often compiled from a diversity of sources, which may not be fully integrated or completely homogenous, leading to differences between the revenue and expenditure data and the financing data. Differences may also arise between the transactions in debt and other economic flows in debt (i.e. valuation effects and other changes in volume), on the one hand, and the change in debt, on the other. Deviations may also appear due to differences in "vintages" (data compiled at different points in time).

Discrepancies between the non-financial and the financial accounts often relate to the time of recording of treasury or budget transactions compared to the moment these flow through the banking system. Therefore, a notable cause of discrepancies originates from the accrual recording applicable to ESA 2010 data and the difficulty to match cash and accrual data.

The extent of discrepancies can thus be an indicator of the accuracy of the data supplied by the Member States. Therefore, Eurostat monitors discrepancies carefully to determine if their size is excessive or if they accumulate (i.e. are of the same sign) over time. In particular, a continuously positive discrepancy may put into question whether the deficit is appropriately measured.

In general, the statistical discrepancies for the EU and the euro area (EA) are relatively small.

For the year 2020, relatively large discrepancies were reported by Ireland (-0.3% of GDP), France (-0.3% of GDP), Croatia (-0.3% of GDP), Malta (+0.3% of GDP), Finland (-0.3% of GDP), Germany (-0.2% of GDP), Estonia (+0.2% of GDP), Slovakia (-0.2% of GDP) and Sweden (-0.2% of GDP).

Over the years 2017-2019, relatively large statistical discrepancies were reported by Belgium (2018, -0.3 % of GDP), Ireland (0.4% of GDP in 2018 and 0.2% of GDP in 2017), Slovakia (2018, -0.2% of GDP) and Finland (2018, -0.2% of GDP).

No larger-than-usual statistical discrepancies² (above 0.5% of GDP in absolute terms) were reported in 2017-2020.



Figure 13: Statistical discrepancies as a percentage of GDP, 2017-2020

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Source: Eurostat (online data code: gov_10dd_edpt3)

² Explanations about the classification of discrepancies used in this note are provided in the methodological ANNEX.

Table 3: Stock-flow adjustment tables in years 2017-2020



Stock-flow adjustment to General government - 2017 [as % of GDP]

Stock-flow adjustment to General government - 2018 [as % of GDP]



Stock-flow adjustment to General government - 2019 [as % of GDP]



Stock-flow adjustment to General government - 2020 [as % of GDP]



Methodological ANNEX

The **legal basis** for the excessive deficit procedure (EDP) is Article 126 of the Treaty on the functioning of the European Union and Protocol 12 on the excessive deficit procedure annexed to the Treaty. Article 126 states that:

- 1. Member States shall avoid excessive government deficits.
- 2. The Commission shall monitor the development of the budgetary situation and of the stock of government debt in the Member States with a view to identifying gross errors. In particular it shall examine compliance with budgetary discipline on the basis of the following two criteria:
 - (a) whether the ratio of the planned or actual government deficit to gross domestic product exceeds a reference value, 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) whether the ratio of government debt to gross domestic product exceeds a reference value, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

The reference values are 3% for the deficit and 60% of GDP for the government debt in the annexed Protocol.

Source of fiscal data: Council Regulation 479/2009 defines the data to be reported by Member States to the European Commission in the context of EDP reporting³: the notification tables 1-4. In particular, EDP table 3A, "*Provision of the data which explain the contributions of the deficit/surplus and the other relevant factors to the variation in the debt level (general government*)", is the basis for the comments and graphs presented in this document.

Detailed data, including tables as reported by Member States, can be found on the Eurostat website in the <u>Government Finance Statistics</u>, as well as in the dedicated <u>EDP notifications</u> sections.

Deficit: The Protocol on the excessive deficit procedure annexed to the Treaty requires that the government surplus/deficit is the net lending/net borrowing as defined by the European System of Accounts (ESA) of the general government sector⁴.

Net lending/net borrowing (B.9) is the balancing item of the capital account in ESA 2010. It is also calculated as the difference between total revenue and total expenditure of the general government sector as defined in the Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union. For further details see ESA 2010 § 8.98 and 8.100 as well as chapter 20 of ESA 2010.

Government gross debt⁵: According to the protocol annexed to the Treaty, the government debt is the gross debt outstanding at the end of the year of the general government sector measured at

³ Excessive Deficit Procedure (EDP) reporting as requested in the Protocol annexed to the Treaty on functioning of the European Union (consolidated version 2012, see Official Journal C 326/47 of 26.10.2012) and related legal acts.

⁴ ESA 2010 § 2.111-2.113 describes the general government sector as the institutional sector principally engaged in the redistribution of national income and wealth and /or mainly producing non-market output intended for individual and collective consumption, and mainly financed by compulsory payments. For more information on general government sector see also chapter 20 of ESA 2010 and table 24.5 in chapter 24.

⁵ The outstanding general government consolidated debt at the end of each year is reported by Member States in EDP table 1 of the notification tables, according to the European legislation.

nominal value and consolidated. Council Regulation 479/2009 defines further the government debt as the sum of government liabilities in Currency and deposits (AF.2), Debt securities (AF.3) and Loans (AF.4). The Regulation further specifies that nominal value for government debt excludes accrued interest (for most debt instruments) and corresponds to face value.

Consolidation: Member States debt data should be reported consolidated at the level of the general government sector. Consolidation, as defined in ESA 2010⁶, means presenting data relating to a grouping of units as if they were one unique unit. This involves the elimination from both uses/assets and resources/liabilities of all reciprocal links: transactions as well as revaluations, other changes in volumes and stocks, that occur or exist between units which belong to the same grouping — in this case to the general government sector (or its sub-sector). Thus, government gross debt is to be consolidated: therefore holdings of government debt by government units must be excluded.

By the same token, all items reported in EDP table 3A should be also presented on a consolidated basis: not only those related to transactions (e.g. a loan given by central government to a local government unit should be removed from the calculation of the consolidated debt of general government sector as well as from the calculation of loans assets), but also valuation adjustments (such as issuance and redemptions of debt above and/or below par, as well as foreign exchange valuation) and other economic flows adjustments (other volume changes in financial liabilities).

Statistical Discrepancies: *Statistical discrepancies* reflect differences arising from the diversity of data sources and might indicate problems with the reliability of data. For the purpose of this note, Eurostat considers *Statistical discrepancies* with absolute values (expressed as a percentage of GDP) equal to or higher than 0.2% but lower than 0.5% as being 'relatively large'. The ones with values equal to or higher than 0.5% are considered being 'larger than usual'.

Geographical information:

Euro area (EA): Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

European Union (EU): Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland and Sweden.

As of 1 February 2020, the United Kingdom is no longer part of the European Union. Information on dissemination of European statistics after Brexit can be found on the <u>Eurostat website</u>.

⁶ See ESA 2010 § 1.106-1.109.