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**Working Paper**

## A closer look at subnational government finances

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EUROPEAN CENTRAL BANK  
EUROSYSTEM

## Statistical Paper Series

Hans Olsson, Julia Catz

A closer look at subnational  
government finances

No 42 / February 2023

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# Abstract

To carry out the analysis required for monetary policy, the European Central Bank (ECB) and the European System of Central Banks (ESCB) need comprehensive and reliable government finance statistics. The focus of government finance statistics has traditionally been the government as a whole (consolidated), with a particular emphasis on central government. In recent years, however, the focus on subnational government finance statistics has increased, with stories of misreporting by a number of such governments hitting the news. Moreover, subnational governments are the layer of government to which people have the closest connection through their use of services that are either subsidised or directly provided by these bodies. These two aspects prompted the authors to take a closer look at the subnational government finance statistics of all European Union (EU) countries during the period 2000-19 (before, during and after the financial crisis). Data for the year 2020 are not included in this paper to prevent the analysis being skewed by the impact of government coronavirus measures.

First of all, subnational government deficit figures are scrutinised and one of the questions asked is the extent to which the financial crisis affected deficit figures. In the next section, the change in government debt is examined as a comparison with the deficit figures could provide further information on the financing of subnational government deficits. The authors assess which part of subnational government debt is held by other subsectors of government and go on to examine the financial assets held by subnational governments and their net financial worth. Has higher debt eroded subnational governments' net financial worth or has net financial worth remained relatively stable over time? The paper then delves into subnational government expenditure to establish the types of activities subnational governments spend their money on. Finally, the authors look at the sources of revenue of subnational governments to establish which part is financed by central government and which part is financed by other revenue sources.

**Keywords:** government finance statistics, state and local government, deficit, revenue, expenditure, debt, net financial worth, financial crisis

**JEL classification:** H11, H2, H41, H7

# 1 Introduction

The focus of government finance statistics is usually on the consolidated general government finances. For the excessive deficit procedure<sup>1</sup> in the EU, the target variables are the deficit and the consolidated debt of all government entities. However in this paper we would like to shift the focus from the government as a whole to the finances of municipalities, provinces and, for some countries, states. In short, we would like to shift the focus to the finances of subnational government.

Subnational governments are the part of government which people are closest to. Subsidised local transport, local swimming pools and school meals are just a few examples of the ways that subnational governments affect our everyday lives. The impact of subnational governments on the lives of Europeans is a good reason to examine their finances more closely.

Also, in recent years there have been cases in which the insufficient quality of the government finance statistics of some subnational governments has led to fines from the European Council. In 2018, the Council imposed a fine of €26.82 million on Austria for the manipulation of debt data in Salzburg state.<sup>2</sup> In 2015, it imposed a fine of €18.93 million on Spain for the manipulation of deficit data in the Autonomous Community of Valencia.<sup>3</sup> The importance the Council attaches to the quality of subnational government finance statistics is an additional motive for further investigation. Finally, we look into the large spending and debt-raising autonomy of subnational governments in certain countries (e.g. Spanish or Belgian regions, or, potentially, German federal states) where the control of central government or fiscal coordination may be partially limited, which could endanger compliance with European budgetary rules.

In this paper we take a closer look at all components of subnational government finances: deficit, (change in) debt, financial assets and financial net worth, and revenue and expenditure. One question our analysis tries to answer relates to the impact of the financial crisis on subnational government finances. Therefore, we have established three separate periods: the pre-crisis years (2000-07), the crisis years (2008-12) and the post-crisis years (2013-19).<sup>4</sup> We would also like to gain a better understanding of the development of the deficit and the change in debt over the years. These two variables are closely related and a litmus test for the quality of government finance statistics that shows whether there is a good explanation for any differences between these two variables.<sup>5</sup>

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<sup>1</sup> For more information, see the [Eurostat explanation of the excessive deficit procedure](#).

<sup>2</sup> See [Council Implementing Decision \(EU\) 2018/818](#) of 28 May 2018 imposing a fine on Austria for the manipulation of debt data in Land Salzburg.

<sup>3</sup> See [Council Decision \(EU\) 2015/1289](#) of 13 July 2015 imposing a fine on Spain for the manipulation of deficit data in the Autonomous Community of Valencia.

<sup>4</sup> Based on data with a cut-off date of 21 June 2021.

<sup>5</sup> See Kezber, L. and Maurer, H. (2018), "[Deficit-debt adjustment \(DDA\) analysis: an analytical tool to assess the consistency of government finance statistics](#)", *Statistics Paper Series*, No 29, ECB, Frankfurt am Main, November.

We also consider which part of subnational government debt is held by other subsectors of government, since only the part that is held by non-government units affects consolidated general government debt – a key policy variable in Europe. To assess whether higher debt has eroded subnational governments' net financial worth, or whether net financial worth has remained relatively stable over time, we take a closer look at the financial assets held by these subnational governments. We then examine which particular types of activities are financed by subnational governments and whether this is comparable between countries. Finally, we look at the sources of revenue of subnational governments to establish which part is financed by central government and which part is financed by other revenue sources.

## Box 1

### How does subnational government fit into the government sector?

---

Governments provide goods and services to the community that market producers do not provide. For instance, it is not possible for a household to buy its own law enforcement but it is possible for the government to provide law enforcement to the community as a whole. Also, there are goods and services that are provided by market producers to the community but financed by the government through social transfers in kind. Governments can levy taxes to pay for the goods and services they provide or finance, and to redistribute income and wealth.

The European system of accounts (ESA) 2010,<sup>6</sup> the legal text that describes how macroeconomic statistics should be compiled in the EU, distinguishes between four layers of government.

- Central government (ESA 2010 subsector S.1311): this layer includes all entities (excluding social security funds; see below) whose competence pertains to the country as a whole.<sup>7</sup> Examples are the Ministry of Defence and the Ministry of Foreign Affairs.
- Social security funds (ESA 2010 subsector S.1314): this layer includes all entities that operate or manage a social security scheme in which a part or the whole population of a country are obliged to participate. Contrary to insurance schemes, contributions paid to social security funds do not have a direct link to any risk (for unemployment, old age, etc.) borne by the persons participating in the scheme.
- Local government (ESA 2010 subsector S.1313): this layer includes municipalities and provinces, and non-market entities controlled by them.
- In some countries (Belgium, Germany, Spain and Austria, among EU Member States) there is a "state government" layer (ESA 2010 subsector S.1312) between central government and local government. In Germany and Austria these are called "Bundesländer", in Belgium they are known as regions and communities and in Spain they are called Regional Autonomous Governments.

To allow for a level playing field when comparing data for different countries, this paper applies a definition of subnational government which includes all government entities other than central government and social security funds. In other words, the data for the ESA 2010 subsector "local government" (S.1313) and ESA subsector "state government" (S.1312) are combined to obtain comparable variables.

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<sup>6</sup> See [Regulation \(EU\) No 549/2013](#) of the European Parliament and Council of 21 May 2013 on the European system of national and regional accounts in the European Union.

<sup>7</sup> Including non-market entities controlled by them.

## 2 A closer look at subnational government deficits

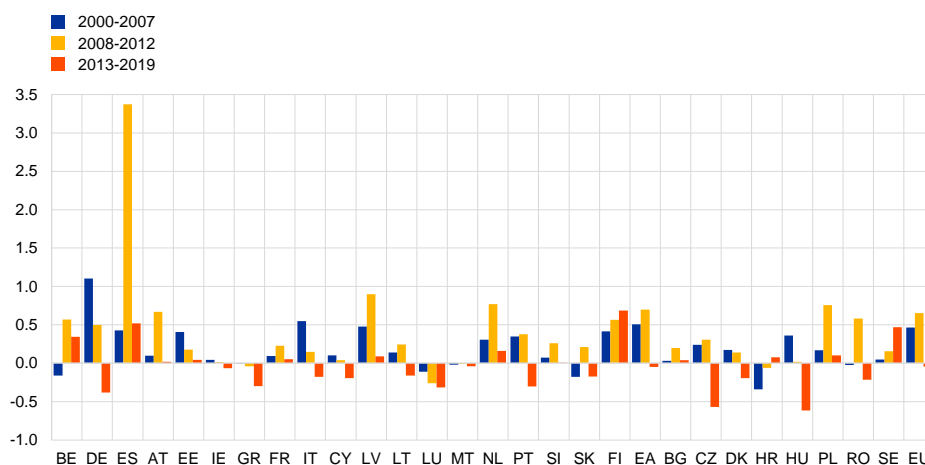
Subnational government net lending/net borrowing (also known as deficit/surplus) is defined in the ESA 2010 as the difference between government revenue and expenditure. It is a balancing item and thus not derived directly.

When the subnational government net lending/net borrowing is negative (positive), it is reporting a deficit (surplus), which means that expenditure is higher (lower) than revenue. A subnational government cannot run a large deficit over a long period of time without financing it in some way, either by reducing assets through the sale of financial or non-financial assets such as land, and/or by increasing borrowing, thereby increasing debt.

One question we would like to answer is: How did the financial crisis affect the subnational government finances of EU Member States. Therefore, we look at the period leading up to the financial crisis, 2000-07, compare it with the situation during the central years of the financial crisis 2008-12, and then with developments in the post-crisis period, 2013-19.

**Chart 1**  
Subnational government deficits

Average per period



Source: ESCB.

Note: as a percentage of the average GDP of each period, a positive number indicates a deficit, a negative number indicates a surplus.

Chart 1 presents the deficit (with a positive sign) cumulated over the period expressed as a percentage of the average gross domestic product (GDP) in each period. In this way, it is possible to analyse the broader trend over the period rather than looking at a single year.

During the period leading up to the financial crisis, 2000-07, the subnational governments of most countries reported average deficits, or in a few cases minor



surpluses, ranging from a small surplus of less than 0.5% of GDP to a deficit of slightly more than 1.0% of GDP. The euro area average deficit was 0.5% of GDP and the EU average was slightly lower at 0.4%. In this period, subnational governments in only two EU Member States, Germany and Italy, showed an average deficit that was higher than 0.5% of GDP while six countries reported a surplus.

Germany had the highest average deficit in this period, at around 1.1% of GDP. This was mainly due to the federal state governments (Länder), which were consistently running deficits over the period. During this time Germany, was referred to as “the sick man of Europe”<sup>8</sup> and was experiencing slow growth, high unemployment and a strained welfare state before the Agenda 2010 reform of the welfare system.

During the period of the financial crisis there was an increase in the subnational government average deficit in about 70% of EU Member States and a decrease in the rest. Spain stands out for the exceptional increase in its average deficit – to 3.4% of GDP – in the period 2008-12. This was due to the very high deficits reported for Spain’s state government – €155 billion in total – caused by the smaller transfers received from central government. Looking at the euro area and EU totals, a slight increase can be observed in the average deficit, to 0.7% and 0.6% of GDP, respectively. Three countries reported a surplus.

Thus, based on the euro area and EU aggregate deficit, the financial crisis does not seem to have had a strong effect on the finances of EU subnational governments. During the financial crisis, support for financial institutions was usually covered by the central government, so we would expect subnational government finances to be less affected by these support measures. With the possible exception of cases where local or state governments had ownership interests in a financial institution in distress, which they needed to support, e.g. state-owned banks or credit institutions in Germany (Landesbanken) or Spain. The cost for subnational governments should be considered a secondary effect of the financial crisis and the downturn in the economy: increased expenditure on social protection and lower tax revenues.

Furthermore, subnational government finances may also need to comply with fiscal rules at the subnational level, e.g. in Italy, subnational fiscal rules have been in place since 1999 and were strengthened in the aftermath of the financial crisis. Information on subnational fiscal rules is collected occasionally by the ESCB Working Group on Public Finance through a questionnaire on national fiscal frameworks.<sup>9</sup> The large improvement in the finances of subnational governments in Germany compared with the pre-crisis period also had a stabilising effect on the euro area and the EU aggregate deficit, which would otherwise have been worse.

The period after the financial crisis, 2013-19, reflects the results of increased austerity and the implementation, among other things, of new budget rules by the European Commission to lower the deficits of the general government sector. The deficits of the programme countries (Ireland, Greece, Spain, Cyprus and Portugal) improved more significantly than in the rest of the euro area countries. Compared

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<sup>8</sup> See Siegele, L. (2004), “[Germany on the mend](#)”, *The Economist*, Berlin, November 17.

<sup>9</sup> See also Nerlich, C. and Reuter, W.H. (2013), “[The design of national fiscal frameworks and their budgetary impact](#)”, *Working Paper Series*, No 1588, ECB, September.



with the crisis period, the deficit decreased in all EU Member States except for Finland and Sweden, which reported an increase. Therefore, the austerity measures brought the EU and euro area deficit to a minor surplus (less than 0.1% of GDP). Only two countries, Finland and Spain, reported an average deficit of over 0.5% of GDP, while 14 countries reported surpluses.

Lastly, looking at the deficit in the last period, the general trend has been towards a situation of greater financial stability for subnational governments, with surpluses or relatively small deficits.

### 3 A closer look at subnational government debt

In this section we take a closer look at developments in subnational government debt. The first part will address the composition of debt in terms of financial instruments. We will then look at the size of the debt at different periods in time.

There are numerous reasons for taking on debt. It may be part of financing for infrastructure or buildings that have a high initial cost but a long lifespan or used to overcome liquidity shortfalls when revenue and expenditure do not match in terms of timing. Debt developments usually follow movements in the deficit in the sense that a deficit would need to be financed at some point with an increase in debt. There is always the option of reducing financial assets, which in the short run could keep debt from increasing in a period of deficit. Deficit data can be compared with developments in government debt and financial assets known as the deficit-debt adjustment, which is further explained in Section 4.

Subnational government debt is the sum of the subnational government liabilities in currency<sup>10</sup> and deposits, debt securities and loans as defined by the ESA 2010. Subnational governments can also have liabilities in the form of pension claims or other accounts payable/trade credits but they are not included in the Maastricht debt definition (see Box 2 below).

#### Box 2

##### Maastricht debt and main financial assets

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General government gross debt, also known as Maastricht debt, or EDP debt, is defined by EU law<sup>11</sup> as:

- the consolidated liabilities of the ESA 2010 general government sector (S.13);
- in the ESA 2010 categories: currency and deposits (AF.2), debt securities (AF.3) and loans (AF.4);
- measured at “nominal value”, further defined in the regulation as “face value” – this means that government debt in particular is not affected by changes in market interest rates and excludes unpaid accrued interest.

Note that Maastricht debt does not include all government liabilities. It excludes:

- monetary gold and special drawing rights (SDRs) (AF.1);
- equity and investment fund shares/units (AF.5);

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<sup>10</sup> It should be noted that subnational governments do not usually issue currency.

<sup>11</sup> See [Council Regulation \(EC\) No 479/2009](#) as amended by [Commission Regulation \(EU\) No 220/2014](#).

- insurance, pension and standardised guarantee schemes (AF.6);
- financial derivatives and employee stock options (AF.7);
- other accounts receivable/payable (AF.8) including trade credits and advances (AF.81) originating from differences in timing between transactions and payments to providers of goods and services;
- accrued interest, whether recorded with the underlying instrument or recorded in other accounts payable (AF.8).

The concept of “main financial assets” is not established in EU law. It is a concept used in the ECB’s analysis of the deficit-debt adjustment, of which transactions in main financial assets form a large part. Transactions in main financial assets are transactions in:

- currency and deposits (AF.2);
- debt securities (AF.3);
- loans (AF.4);
- equity and investment fund shares or units (AF.5).

These are the asset categories in which government has the most sizeable holdings.

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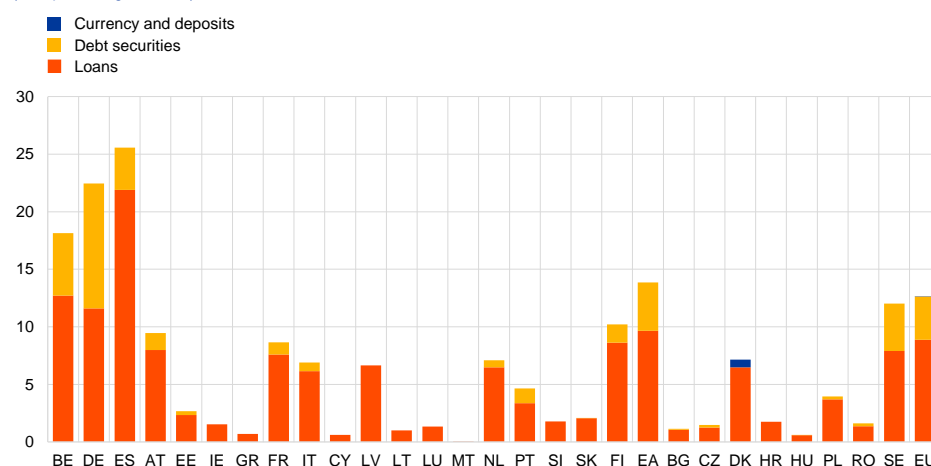
Chart 2 depicts the breakdown of subnational government debt at the end of 2018. Consolidated subnational government figures are used, which means that they exclude debt that is issued by subnational government (e.g. one municipality) and held by subnational government (e.g. another municipality). Debt does include liabilities with other government subsectors in the country (i.e. central government and social security funds). In contrast with general government, where debt is mainly composed of debt securities, for subnational government, loans account for the largest part of debt in all EU countries, as it is easier for central government to borrow through debt securities than it is for subnational governments. In some countries, however, municipalities or regional governments jointly issue debt securities to borrow a larger volume of money. Denmark is the only EU country where the subnational government holds debt in the form of currency and deposits.

## Chart 2

### Breakdown of subnational government debt by financial instrument

End of 2019

(as a percentage of GDP)



Source: ESCB.

Having looked at how the composition of debt has developed over different points in time, Chart 3 depicts subnational government debt levels at the end of 2007, 2012 and 2019. The debt levels are consolidated subnational government figures (see Box 3). However, debt issued by subnational government and held by other general government subsectors in the country (i.e. central government and social security funds) is included and shown in the shaded area of the chart, as it provides additional relevant information.

## Box 3

### Consolidation

In government finance, statistics data are usually presented on a consolidated basis. A detailed description of what this implies for the different concepts used in this paper is provided below.

### Government debt

General government debt excludes all holdings of government debt by other government units. Likewise, the debt of each government subsector excludes the debt issued and held by that subsector.

As explained in Box 1, to allow for a level playing field when comparing data for different countries, this paper applies a definition of subnational government which includes all government entities other than central government and social security funds. In other words, data for the ESA 2010 subsectors “state government” (S.1312) and “local government” (S.1313) are added together. Thanks to the information the ECB collects on debt issued by each government subsector that is held by other subsectors,<sup>12</sup> it is possible to remove the debt issued by state government that is held

<sup>12</sup> According to [Guideline \(EU\) of the European Central Bank](#) of 24 April 2018 amending Guideline ECB/2013/23 on government finance statistics (ECB/2018/13).

by local government and vice versa. Hence, the subnational government debt presented in this paper is consolidated.

### Government financial assets, liabilities and net financial worth

Unlike for the debt of government subsectors, for financial assets and liabilities at market value there is no detailed whom-to-whom information available. Thus, the financial assets and liabilities of subnational government cannot be consolidated between subsectors. Net financial worth, defined as financial assets minus liabilities) is automatically consolidated since it is a balancing item.

### Government revenue and expenditure

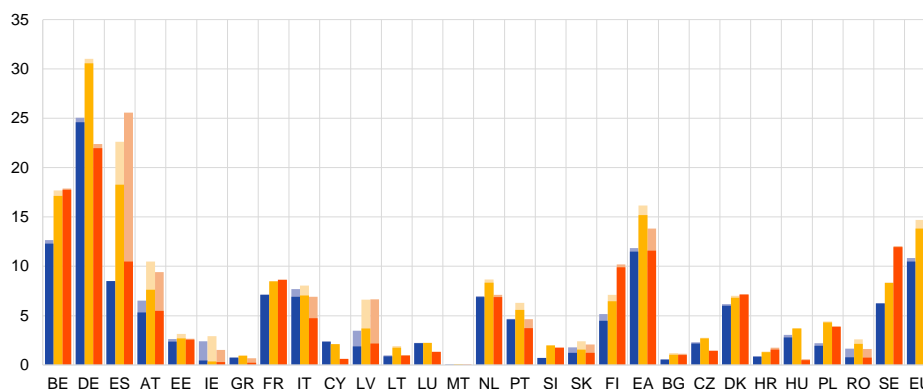
Total general government revenue and expenditure exclude all revenue and expenditure flows between government subsectors. However, there is no detailed information available on what each subsector receives as revenue from the other subsectors. Subnational government revenue/expenditure in this paper is computed as the sum total of the revenue/expenditure of subsectors of local and state government. The revenue/expenditure flows between them cannot be removed on consolidation. The government deficit (defined as revenue minus expenditure) is consolidated since it is a balancing item.

**Chart 3**  
Subnational government debt

End of period

(as a percentage of GDP)

■ 2007  
■ 2012  
■ 2019



Source: ESCB.

Note: consolidated subnational government debt, shaded areas refer to debt held by other government subsectors.

It can be observed that debt levels are fairly uneven among the EU countries, ranging from Malta with debt of close to 0% of GDP to Germany which reported subnational government debt of slightly above 30% of GDP in 2012. Euro area average debt ranged between 11% and 16% of GDP for the three periods and the EU average was a few percentage points lower (8-13% of GDP). In fact, only three euro area countries reported debt that was higher than the euro area average for any period – namely Belgium, Germany and Spain. The fact that only three countries are above the euro area average is due to the high level of debt of German subnational

government and Germany's large share of the total euro area. For non-euro area countries, only Sweden was above the EU average in 2019. The size of the debt also reflects the level of the size of the subnational government and its activities. In Malta, the activities and responsibilities of the subnational government (expressed as a percentage of GDP for a relative comparison) are much more limited than the corresponding activities in other countries.<sup>13</sup>

Generally, countries in Eastern Europe<sup>14</sup> have a lower debt-to-GDP ratio for subnational government. These countries also have a generally lower debt-to-GDP ratio for the whole government sector.

While this paper does not aim to go into precise detail about the holders of subnational government debt, it is interesting to see how much of subnational government debt is held by other government subsectors. In Chart 3, the shaded areas of the bars show the subnational government debt held by other government subsectors. For most countries, these holdings are very small compared with the total outstanding subnational government debt. However, for some countries like Ireland, Spain, Latvia, and Austria they are larger, or even account for most of non-consolidated subnational government debt. Spain is an especially interesting case as before the financial crisis there were no other government subsector holdings of subnational government debt, while in 2012 these holdings represented 4.3% of GDP. By 2019, they had increased even further, to account for most of the non-consolidated debt (at 15.1% of GDP) while at the same time debt extended to non-government sectors actually decreased compared with 2012. This suggests that rather than giving direct support to the subnational government in the form of capital transfers during and in the aftermath of the financial crisis, it was provided as a loan that had to be repaid. It could also suggest that the subnational governments were having difficulties raising funds on the market and it was more beneficial for the central government to borrow and then lend the funds to the subnational government. If so, we could expect a further decrease in the holdings of subnational government debt by other subsectors in Spain as the markets return to normal.

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<sup>13</sup> For further information on the activities and powers of local government, see "Local and Regional Governments in Europe. Structures and Competences", Council of European Municipalities and Regions (CEMR).

<sup>14</sup> Countries that joined the EU in 2004, except Malta and Cyprus.

## 4 Subnational government deficit-debt adjustments

This section presents an analysis of the deficit-debt adjustment (DDA) for subnational government. The DDA analysis seeks to explain the difference between the deficit and the change in debt. It is a way of checking the quality of government finance statistics. The components of the DDA are described in more detail in Box 4.

The DDA analysis is usually performed on general government data. A similar analysis at the subnational government level provides additional challenges due to the lack of detailed data. The presentation below is therefore similar to, but less detailed than, the one presented in Chapter 5 of the ECB Statistics Paper on the DDA (for general government) by Kezbere and Maurer.<sup>15</sup>

### Box 4

#### The deficit-debt adjustment (DDA) and its importance for data quality monitoring of GFS

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Although government deficit and debt are closely interrelated, changes in debt levels in any given year may be larger or smaller than the deficit. Since government deficit and debt are the key target variables of fiscal surveillance, it is important to understand why they might diverge.

The difference between the change in debt and the deficit is known as the “deficit-debt adjustment” (DDA) or, more generally, as the “stock-flow adjustment”. As long as the components of the DDA are sound, the difference between the change in debt and the deficit has an explanation and raises no concerns about data quality.

The DDA can be divided into three main pillars:

1. transactions in main financial assets;
2. valuation effects and other changes in the volume of debt;
3. time of recording and other differences.

**Pillar 1 – transactions in main financial assets** includes transactions in deposits held by the Ministry of Finance or other governmental units at the central bank and commercial banks, the net acquisition of non-government securities by social security funds (which build up assets to cover future pension entitlements) and the net acquisition of equity held by government in public corporations. With a given deficit, government financial investment increases the borrowing requirement (the amount that government needs to borrow to finance its activities) and hence government debt. Conversely, a reduction in financial assets (as a result of privatisations, for instance), tends to reduce the borrowing requirement and debt, while leaving the deficit unchanged.

Large positive accumulations of transactions in main financial assets may highlight some risks to the quality of government accounts. For example, an accumulation of equity through capital

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<sup>15</sup> See footnote 4 for more details.



injections could in some cases hide capital transfers to corporations that should instead be booked as deficit-increasing transactions (expenditure). The accumulation of loans (to corporations) could in some cases hide financial support for corporations experiencing difficulties, which should also be booked as deficit-increasing transactions (expenditure).

**Pillar 2 – valuation effects and other changes in the volume of debt** can be divided into three groups:

- *the market-to-face-value adjustment;*
- *foreign exchange holding gains and losses;*
- *other changes in the volume of debt.*

General government debt is recorded at face value, whereas financial transactions, and thus net lending/net borrowing, are recorded at market value. To compensate for this difference in valuation, the DDA includes a *market-to-face-value adjustment*. The adjustment applies only to transactions, that is, to new borrowings and repayment or buying-in of debt at prices which differ from the nominal value (issuances and redemptions below or above par). The calculation of the market-to-face-value adjustment (which also includes the difference between interest accrued and paid) can be very complicated and assessing its value is an important data quality check for government accounts.

General government debt denominated in foreign currency<sup>16</sup> is valued at current exchange rates on the balance sheet date. The level of outstanding debt may vary without any counterpart in the general government deficit. *Foreign exchange holding gains and losses* are therefore another element of the DDA.

Changes in debt related to reclassifications are recorded in *other changes in the volume of debt*. These include changes in the statistical classification of units from the government to a non-government sector (or vice versa). Following the reclassification, liabilities of these units cease to be government debt, with no counterpart in the general government deficit (or they can increase government debt without any counterpart in the general government deficit).

Both the deficit and debt are consolidated in subnational government sectors, whereas transactions in main financial assets are not (see Box 3). Transactions that are removed from debt on consolidation are thus not removed on consolidation from transactions in main financial assets. For example, if state government extends a loan to local government, this would not have an impact on the consolidated debt, but it would have an impact on the main transactions in financial assets. The counterpart to these transactions in main financial assets would be another change in the volume of debt. In practice, such transactions are not large.

This may also conceal statistical discrepancies between financial flows and the stock of debt, if for instance different statistical sources are used for flows and stocks. If the discrepancies are large, this raises concerns about the quality of the government accounts.

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<sup>16</sup> Unless it is covered using a financial derivatives contract, in which case the debt is valued at the exchange rate in the contract.

### Pillar 3 – time of recording and other differences

**Time of recording differences** refer to the difference between the recording of expenditure and related payments and that of revenue and the related cash flow to government. For instance, taxes can be recorded as reducing the deficit at the time that they are assessed, even though payment may take place at a later date. The delayed payment of taxes to government does not reduce the borrowing requirement although the taxes themselves reduce the deficit. Monitoring the difference between taxes and social contributions that have been assessed but not yet paid is very important to ensure that taxes and social contributions are not structurally overestimated and the government deficit is therefore underestimated.

**Other differences include** the difference between the deficit as measured by the non-financial accounts and the deficit as measured by the financial accounts. Because different data sources are used to calculate the two balances, these are not always equal. If the differences between the two balances are large, this raises concerns about the quality of the government accounts.

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The DDA analysis was carried out for the three periods assessed in the paper – the pre-crisis period, 2000-07, the crisis period, 2008-12, and the post-crisis period, 2013-19, spanning eight, five and seven years, respectively. Quarterly data have been annualised and expressed as a percentage of GDP and the data were aggregated over the period with no adjustments. As both quarterly and annual figures have been included in the analysis, it is important that they belong to the same data vintage. In this analysis, the annual and quarterly data published in April 2021 were used. See Annex for more detailed information on the sources used.

Table 1 shows that the DDA for the euro area was an average of 0% of GDP before the financial crisis, it then increased to 1.5% of GDP during the financial crisis and decreased again to 1% of GDP after the financial crisis. During the crisis, three euro area countries with a state government (Belgium, Germany and Spain) showed marked absolute changes in DDA compared with the pre-crisis period. The post-crisis period (2013-19) generally shows smaller DDAs compared with the pre-crisis years before, i.e. less divergence from zero, although there are some cases where it is still high, such as Spain, Czech Republic and Sweden, with a DDA of 4.4%, 3.4% and 3.3% of GDP respectively.

**Table 1****DDA of subnational governments over three periods**

(percentage of GDP, aggregated over the period 2000-07, 2008-12, 2013-19)

	2000-2007	2008-2012	2013-2019
BE	1.7	4.0	1.7
DE	-1.0	6.2	0.1
ES	0.6	-3.5	4.4
AT	1.7	1.7	1.0
EE	-0.5	0.0	0.6
IE	2.0	0.1	0.5
GR	0.8	0.2	1.8
FR	1.0	0.8	1.1
IT	0.1	-0.3	0.9
CY	0.2	-0.2	0.0
LV	1.3	-1.3	1.5
LT	-0.3	-0.1	0.8
LU	2.4	1.7	2.0
MT	0.2	0.0	0.3
NL	-2.7	-1.8	-1.0
PT	1.1	-0.5	1.8
SI	0.1	0.0	0.3
SK	3.0	-0.1	1.4
FI	-0.6	-0.4	-0.2
EA	0.0	1.5	1.0
BG	0.2	-0.1	0.1
CZ	-0.1	-0.9	3.4
DK	1.7	0.7	2.8
HR	na	0.8	0.2
HU	0.2	1.0	1.6
PL	0.7	-0.7	0.2
RO	2.6	-1.4	1.7
SE	2.7	2.0	3.3
EU	na	1.3	1.0

Sources: Eurostat and ESCB.

Table B in the Annex shows that Germany and Belgium also have the highest net increase in transactions in main financial assets (Pillar 1), at 4.8% and 4.4% of GDP, respectively, during the financial crisis (2008–12). In Germany, subnational government acquired all categories of main financial assets, with acquisitions of equity showing the highest contribution. In Belgium, subnational government granted loans and acquired currency and deposits while debt securities were sold. Apart from Belgium and Germany, Austria also reported a high percentage of GDP (2.1%) in Pillar 1, while Spain saw a negative value of 1.8%. This was due to withdrawals of currency and deposits. It seems likely that state governments have more powers (and concomitant responsibilities) to support financial institutions than local government institutions such as municipalities, which is reflected in the figures for Belgium, Germany and Spain. Outside the euro area, Sweden showed a high

positive value in Pillar 1 (2.6% of GDP) during the financial crisis mainly due to the granting of loans. Sweden is the non-euro area EU country with the largest financial sector.

Interestingly, during this period, nine euro area countries and four non-euro area countries reported a negative total DDA, meaning that the deficit was not fully financed by an increase in debt but rather by a reduction in financial assets (in around one quarter of the cases) and/or changes in Pillar 3 (in 13 countries) mainly due to increases in other accounts payable (e.g. longer delays in the payment of bills by the subnational government).

Table 2 shows the number of countries with a positive or negative DDA that is higher in absolute terms than 0.3% of GDP. The table clearly reflects the effect of the crisis. In the pre-crisis and post-crisis years most countries, both inside and outside the euro area had a positive DDA, while during the crisis period most euro area countries had a negative DDA. Non-euro area countries with a negative DDA increased to three compared with none previously.

We therefore conclude that during the crisis period subnational governments with a negative DDA did not borrow as much as they needed, perhaps due to difficult market conditions, but instead sold off financial assets. We note that the euro area and the EU as a whole saw a net acquisition of financial assets, mainly due to Germany, and many countries reported an increase in other accounts payable which gave them more time to pay their bills. However, this could have harmed the economy as a whole, as companies doing business with subnational government would need to wait longer for payment and could therefore face liquidity problems in financing their expenses such as salaries and rental payments.

In the euro area, the time of recording and other differences were particularly noticeable for Spain in all three periods due to the transactions in other accounts payable. However, in the last period, 2013-19, other accounts payable declined as subnational governments paid bills more rapidly compared with the two previous periods when they increased.

Among the non-euro area countries, Denmark and Sweden had the highest negative values for the time of recording and other differences (Pillar 3), at -3.1% and -2.3% of GDP respectively, in the pre-crisis period. In Denmark, the decrease was mainly attributed to a decrease in accounts receivable, i.e. the government received payments more rapidly, which could be attributed to more effective tax collection, for example. In Sweden, the situation was more complicated as both other accounts receivable and payable increased to almost the same extent. The main sources of the negative value in Pillar 3 were the steady increase in pension liabilities<sup>17</sup> over time and a large accumulated negative discrepancy between financial and non-financial accounts, where the former showed a much higher surplus than the latter. Statistical discrepancies that go in the same direction every year and thus become a large number when accumulated could be a source of concern about the quality of government finance statistics as it signals that some information could be missing.

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<sup>17</sup> These liabilities refer to funded pension liabilities of government employees.

However, the situation in Sweden has improved, as the periods after 2007 show much fewer statistical discrepancies.

**Table 2**

Countries with a DDA higher than 0.3% of GDP (in absolute terms) over the period

	2000-2007	2008-2012	2013-2019
<b>Euro area</b>			
Positive DDA	10	5	14
Negative DDA	5	6	1
<b>Non-euro area</b>			
Positive DDA	4	4	5
Negative DDA	0	3	0
<b>Total EU</b>			
Positive DDA	14	9	19
Negative DDA	5	9	1

Sources: Eurostat and ESCB.

The tables in the Annex also show that valuation effects and other changes in the volume of debt (Pillar 2) are relatively unimportant for the DDA of subnational government, with a few noticeable exceptions: Germany stands out with a value 1.6% of GDP for Pillar 2 in the period 2008-12. This is probably the result of a reclassification of the debt of subnational government owned companies or financial institutions that was reclassified within subnational government. Belgium reported a figure of 1.6% of GDP for Pillar 2 in 2013-19, due to the implementation of a state reform in this period that led to the transfer of outstanding liabilities from the social security sector to the state government.

## 5 Subnational government financial assets

Subnational government financial assets were already touched on in the previous subsection as part of the DDA. However, the focus was on transactions in main financial assets. In this section we look at stocks of financial assets. In the ESA 2010 financial assets are divided into eight different categories: monetary gold (F.1), currency and deposits (F.2), debt securities (F.3), loans (F.4), equity and investment fund shares or units (F.5), insurance, pension and standardised guarantee schemes (F.6), financial derivatives and employee stock options (F.7) and other accounts receivable (F.8).

Chart 4 shows the subnational government stocks of financial assets as a percentage of GDP for three different years: 2007, 2012 and 2019. The assets vary between close to 20% of GDP, for the subnational government of Austria in 2012, to the subnational government in Malta which holds almost no financial assets. The euro area and EU average for financial assets held by subnational government stands at between 8% and just above 10% of GDP and was at a similar level in 2007, 2012 and 2019.

The subnational government of Belgium saw the largest increase in holdings of financial assets between 2007 and 2019, with a rise of 7.5% GDP (although this was mostly the result of reporting on assets that previously not been well covered), followed by Sweden and Germany with 4.1% and 3.6% of GDP, respectively. On the other hand, the Netherlands showed the largest decrease in financial assets held by subnational government, at 2.4% of GDP.

In total, the subnational governments of 15 EU countries increased their holdings of financial assets between 2007 and 2019, while 13 countries reduced their financial assets. However, for most countries this decrease was marginal, less than 1% of GDP. For several countries, such Germany, Ireland, Latvia, the Netherlands, Austria and Denmark financial assets expressed as a percentage of GDP peaked in 2012, at the height of the financial crisis. While this seems surprising, it was partly due to the low GDP in 2012 as, looking at financial assets expressed in euro, the 2019 value was higher than the 2012 value for all these countries.

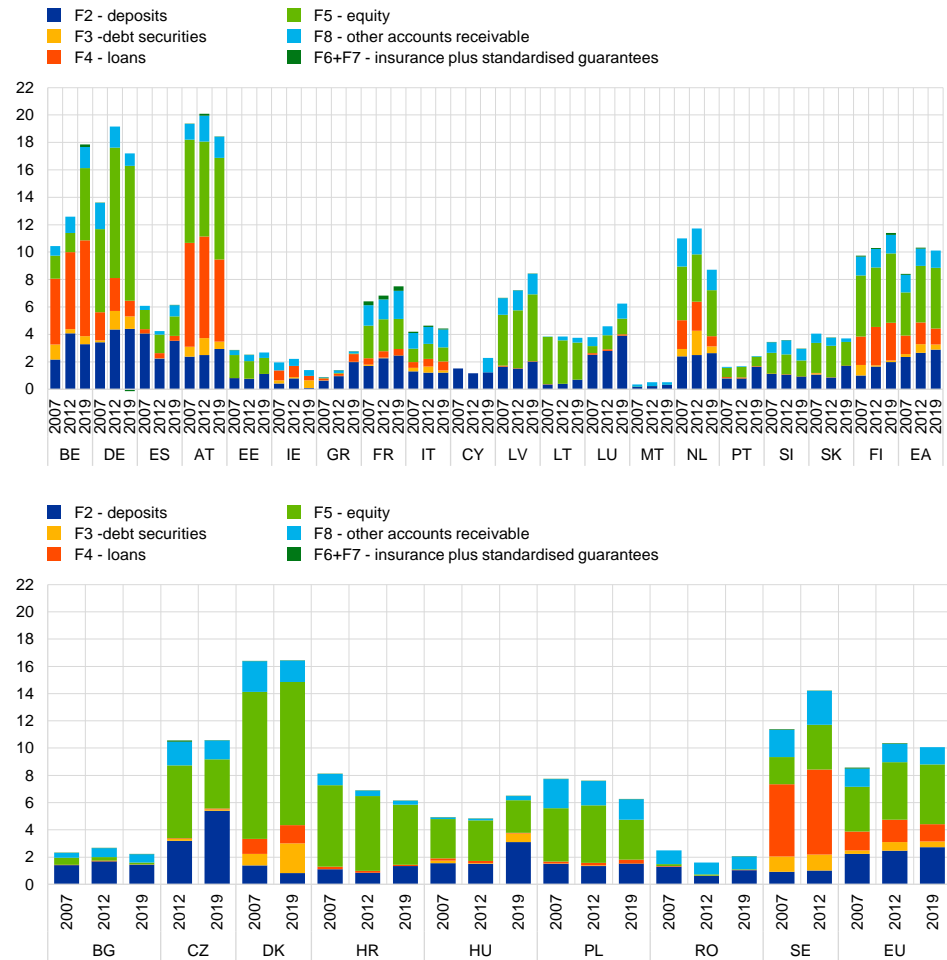
Equity is the most significant financial asset category for the euro area and the EU, followed by deposits and loans, although not all EU countries report holdings of equity and loans. Equity holdings do not only refer to holdings of quoted shares but also, and more importantly for subnational government, to ownership of public local utilities, housing and other similar companies. The loans category stands out as a few countries report large volumes of assets in loans, namely Belgium, Austria and Sweden, and to a lesser extent Germany, the Netherlands and Finland. In contrast, in most other EU countries, subnational governments do not grant loans. In Belgium, Austria and Germany, it should be noted that these amounts include loans between the state (S.1312) and local government (S.1313).

## Chart 4

### Subnational government financial assets

End of period, charts are split between euro area and EU countries

(percentage of GDP)



Source: Eurostat.



## 6 Subnational government net financial worth

Subnational government net financial worth is calculated as its financial assets minus the liabilities. Positive net financial worth means that the financial assets are larger than the liabilities and vice versa for negative net financial worth. It is important to remember that non-financial assets, such as real estate, are not included in net financial worth. If, for example, the subnational government owns real estate then the building itself would not be included in the financial assets (as it is a non-financial asset) but any loan taken up to finance the building would be included under liabilities. The asset structure also has an impact. If for example the subnational government owns residential buildings via a separate (real estate) company, its holdings of the equity of that company would be included as a financial asset.

The net financial worth of subnational government in EU countries ranges from the positive net financial worth of Austria of just above 9% of GDP in 2007 to Spain with a negative net financial worth of almost 24% of GDP in 2012. Although 13 EU countries had a net positive financial worth in 2019, the net financial worth of the euro area and the EU as a whole was significantly negative at 5.9% and 4.6% of GDP, respectively. The explanation for this is that all the larger euro area countries (in particular Germany and Spain, and to a lesser extent France and Italy) reported negative net financial worth and they have a greater impact than smaller countries that reported net positive financial worth. Looking at euro area and EU figures, the effects of the financial crisis on net financial worth would be reflected in a worsening of negative net financial worth in 2012 compared with 2007. In 2019, net financial worth had recovered but had not yet returned to 2007 levels.

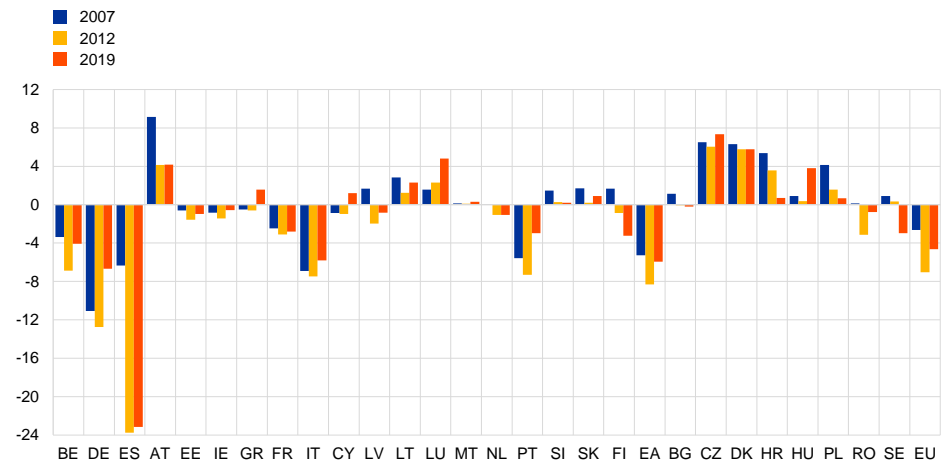
Spain reported the strongest decline in subnational government net financial worth, with a decrease of close to 17% of GDP between 2007 and 2019 following a large increase in debt (in particular debt held by central government and social security funds), which has not been offset by an increase in financial assets. Although it has high positive net worth, Austria reported the second largest decrease, at 5.0% of GDP. Germany and Luxembourg saw the strongest increases in net financial worth, of 4.4% and 3.2% of GDP, respectively, between 2007 and 2019. However, despite this increase, Germany still reported negative net financial worth of 6.7% of GDP in 2019.

## Chart 5

### Subnational government net financial worth

End of period

(percentage of GDP)

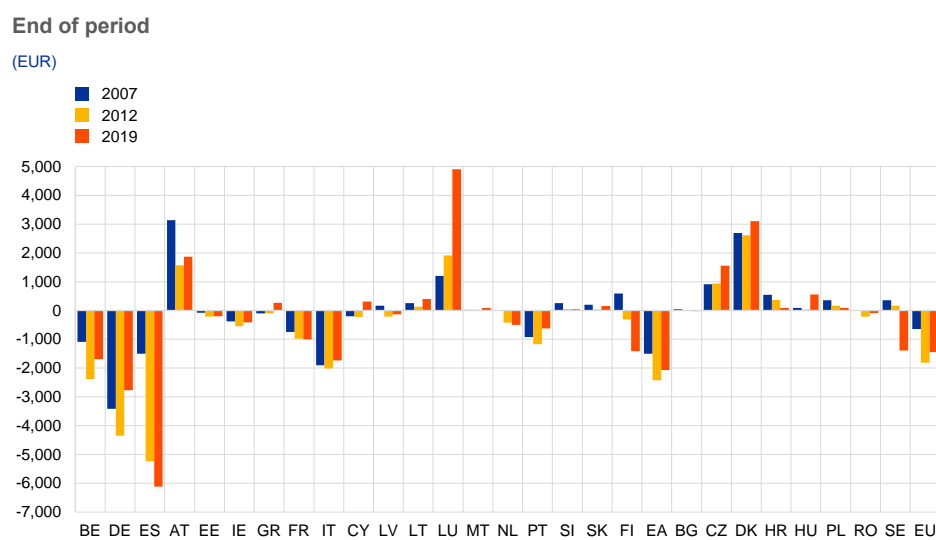


Source: ESCB and Eurostat.

The net financial worth of the subnational government could also be presented per capita. This is shown in Chart 6, reflecting that for many countries net financial worth is not very significant, standing at around +/- €1,000 per person. There are some exceptions, however. Luxembourg and Denmark had positive net financial worth of between €3,000 and €5,000 per capita in 2019, while Spain and Germany stand out for their negative net financial worth of around €6,100 and €2,800 per capita, respectively. Individual countries show different trends over time. For instance, Spain reported a decrease in net financial worth between 2007 and 2019, from €-1,500 to more than €-6,100, while Luxembourg saw a large increase, from €1,200 in 2007 to almost €5,000 per capita in 2019. Denmark, Austria and, to a lesser extent, Czech Republic showed high net financial worth over the whole period.

**Chart 6**

Subnational government net financial worth per capita



Source: ESCB and Eurostat.

## 7 A closer look at subnational government expenditure

This section takes a closer look at subnational government expenditure. The first issue addressed in this section is the overall weight of subnational government expenditure in total government expenditure, to offer an insight into the degree of the decentralisation of public goods and services provided by government. We then take a closer look at what subnational governments spend money on. The section concludes with a look at trends in government expenditure over time.

### 7.1 To centralise or to decentralise? That is the question

The weight of subnational government expenditure in total government expenditure indicates the extent to which the government has decentralised the provision of public goods and services in a country.

In the euro area, subnational government expenditure was around 28% of non-consolidated total government expenditure in 2019. In Malta, the share of subnational government expenditure as a percentage of total government expenditure is very small (at about 1%, see Chart 7). Our first thought was that this is due to the size of Malta. In a small country, there may be less of a need to decentralise government services than in a big country. Nevertheless, in Luxembourg, which has only slightly more inhabitants than Malta, the share of subnational government expenditure as a portion of total government expenditure is 9%, although in geographical size it is larger than Malta. The share of subnational government expenditure as a portion of total government expenditure does not reach 4% in Cyprus, which, in terms of geographical size, is bigger than Luxembourg and also has more inhabitants. The euro area countries where government expenditure is more decentralised than average are Germany (around 40%), Spain (around 39%), Belgium (around 36%) and Finland (more than 32%). The extent to which the provision of government services is decentralised does not therefore appear to be related to the geographical size of the country nor to the size of the population, but rather to political choice.

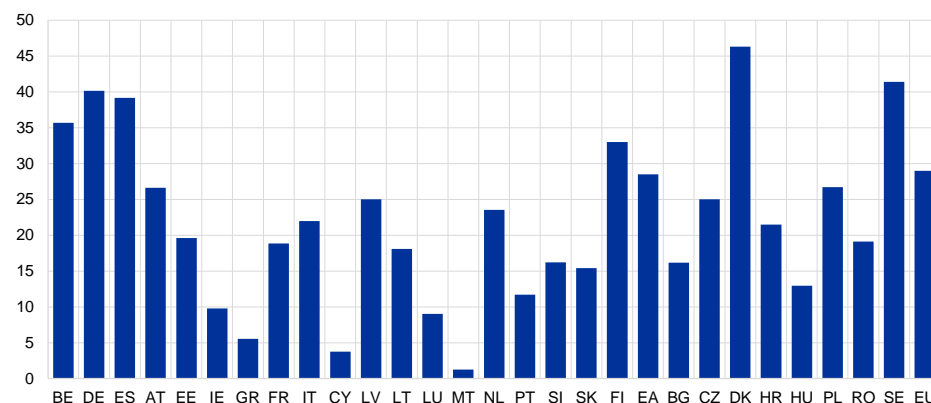
Outside the euro area but still in the EU, in Denmark and Sweden the governments have decentralised a larger part of goods and services than even Germany, with a share of subnational government expenditure as a portion of total government expenditure of around 46% and 41%, respectively.

**Chart 7**

Subnational government expenditure as a share of general government expenditure

**End of 2019**

(as a percentage of general government expenditure, non-consolidated)



Source: Eurostat.

## 7.2 Government expenditure by function

In the euro area, subnational government expenditure stood at around 16% of GDP in 2019. In Belgium and Finland, this percentage was higher (26.4% and 22.0% of GDP, respectively), since government expenditure is relatively decentralised, as seen in Section 3.1. In Germany, Spain and Austria, subnational government expenditure is also higher than the euro area average due to higher government spending in general. Outside the euro area, but still within the EU, subnational government spending is relatively high in terms of GDP in Denmark and Sweden (32.6% and 25.1% of GDP, respectively).

Don't tell me where your priorities are. Show me where you spend your money and I'll tell you what they are.

James W. Frick

Chart 8 below shows the purposes or functions (explained in more detail in Box 5) that subnational governments spend their money on. For general government as a whole the most significant expenditure function is social protection (more than 40% of total government expenditure and almost 20% of GDP in the euro area). At the subnational government level, the picture is more nuanced. Euro area government spending on general public services, education and social protection is around 19% of total subnational government expenditure for each of these functions (around 3% of GDP). Expenditure on health is about 13% of total subnational government expenditure (around 2% of GDP). Subnational government expenditure on economic affairs is the same as expenditure on health in the euro area.

Chart 8 shows that there are considerable differences between countries. Italian subnational governments spend 6.7% of GDP, which is more than three times the euro area average, on health. In Spain, Austria and Finland subnational governments also spend more than the euro area average on health. Expenditure on education is higher than the euro area average in Belgium, Germany, Estonia, Spain, Latvia, Lithuania, the Netherlands, Slovenia, Slovakia and Finland. However, in Ireland, Greece, Cyprus and Malta subnational governments spend nothing or

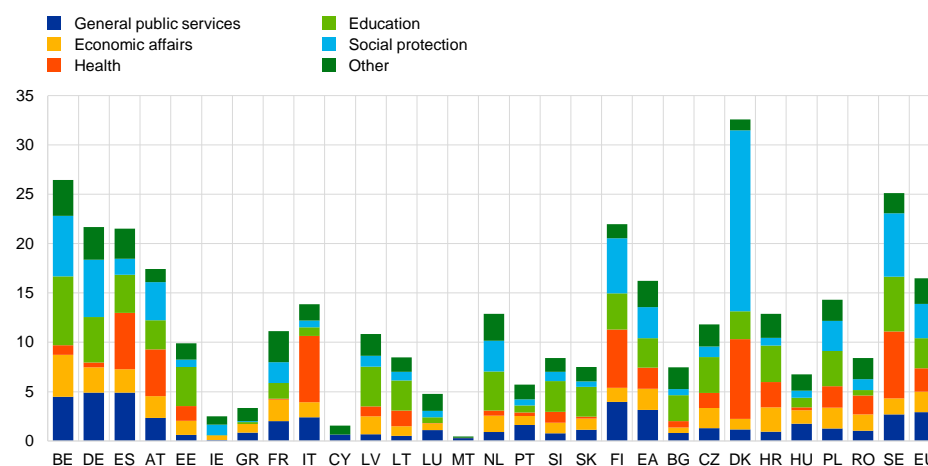
close to nothing on education. Subnational government expenditure on social protection is higher than the euro area average in Belgium, Germany, Austria and Finland. These differences between countries reflect differences in the preferred level of decentralisation for the goods and services provided by government.

## Chart 8

### Subnational government expenditure by function

2019

(as a percentage of GDP)



Source: Eurostat.

Outside the euro area, Denmark has very decentralised expenditure on social protection. At around 18% of GDP it accounts for more than half of subnational government expenditure. In Sweden, social protection represents about a quarter of subnational government expenditure and, at 6.4% of GDP, is almost twice as high as the EU average of 3.5%.

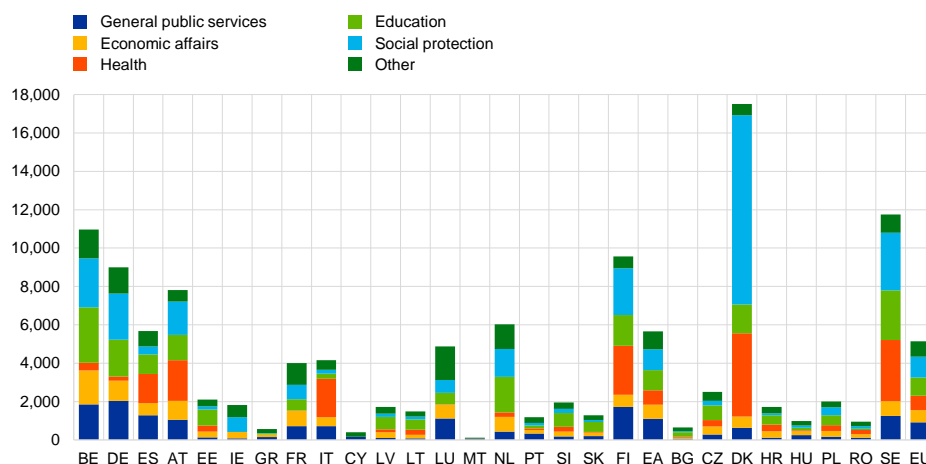
Expenditure per capita (unadjusted for purchasing power) in 2019 revealed some interesting differences compared with figures as a percentage of GDP. Denmark had the highest expenditure per capita and the difference with other countries was more noticeable than as a percentage of GDP. There were more countries with a relatively low level of subnational expenditure per capita, of around €2,000 or less. Italy had higher subnational government expenditure than France as a percentage of GDP, while per capita expenditure was very similar (at around €4,000). The opposite trend was noticed in Germany and Spain, where expenditure as a percentage of GDP was similar but per capita expenditure in Germany was relatively higher (at around €9,000) than in Spain (around €5,700). Euro area and EU subnational government expenditure was very similar as a percentage of GDP but the euro area showed a slightly higher per capita subnational government expenditure (around €500 higher). This can be explained by the higher GDP per capita in the euro area.

**Chart 9**

Subnational government expenditure by function, per capita

**2019**

(EUR)



Source: Eurostat.

**Box 5**

## The functions of government explained

Once a year, all EU Member States provide Eurostat with data on government expenditure by economic function in accordance with the international Classification of the Functions of Government (COFOG).<sup>18</sup> The economic functions in COFOG are basically the different purposes for which governments can spend money. The worldwide use of COFOG allows for an international comparison of government expenditure and economists use COFOG data to determine whether certain types of government expenditure are more conducive to (long-term) economic growth than other types of government expenditure.<sup>19</sup> COFOG encompasses the following 10 functions, each of which is divided into sub-items.<sup>20</sup>

- **General public services:** examples are expenditure on financial (e.g. debt office), fiscal (e.g. tax office) and external affairs (e.g. embassies).
- **Defence:** expenditure on the military (army and navy, etc.).
- **Public order and safety:** expenditure on the police, fire services, courts and prisons.
- **Economic affairs:** this function encompasses expenditure on agriculture, mining, energy, transport (infrastructure, as well as means of transport) and communication.

<sup>18</sup> COFOG data for the EU (and for the US and Japan) are available in the [ECB's Statistical Data Warehouse](#) (SDW).

<sup>19</sup> See the article entitled "The composition of public finances in the euro area", *Economic Bulletin*, Issue 5, ECB, 2017.

<sup>20</sup> For an example of the use of COFOG data, see the article entitled "Social spending, a euro area cross-country comparison", *Economic Bulletin*, Issue 5, ECB, 2019..



- **Environmental protection:** this function does not only include the protection of biodiversity and the landscape, but also waste management, etc.
  - **Housing and community amenities:** expenditure on housing development, street lighting and the water supply.
  - **Health:** expenditure on in- and outpatient services, medication, etc.
  - **Recreation, culture and religion:** this function encompasses a variety of purposes from expenditure on sports and festivals, broadcasting to religious services.
  - **Education:** expenditure on this function can be further subdivided by level of education (primary, secondary, tertiary).
  - **Social protection:** expenditures on this function are subdivided by the type of risk they try to mitigate (e.g. disability, old age, unemployment).
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## 7.3 Subnational government expenditure over time

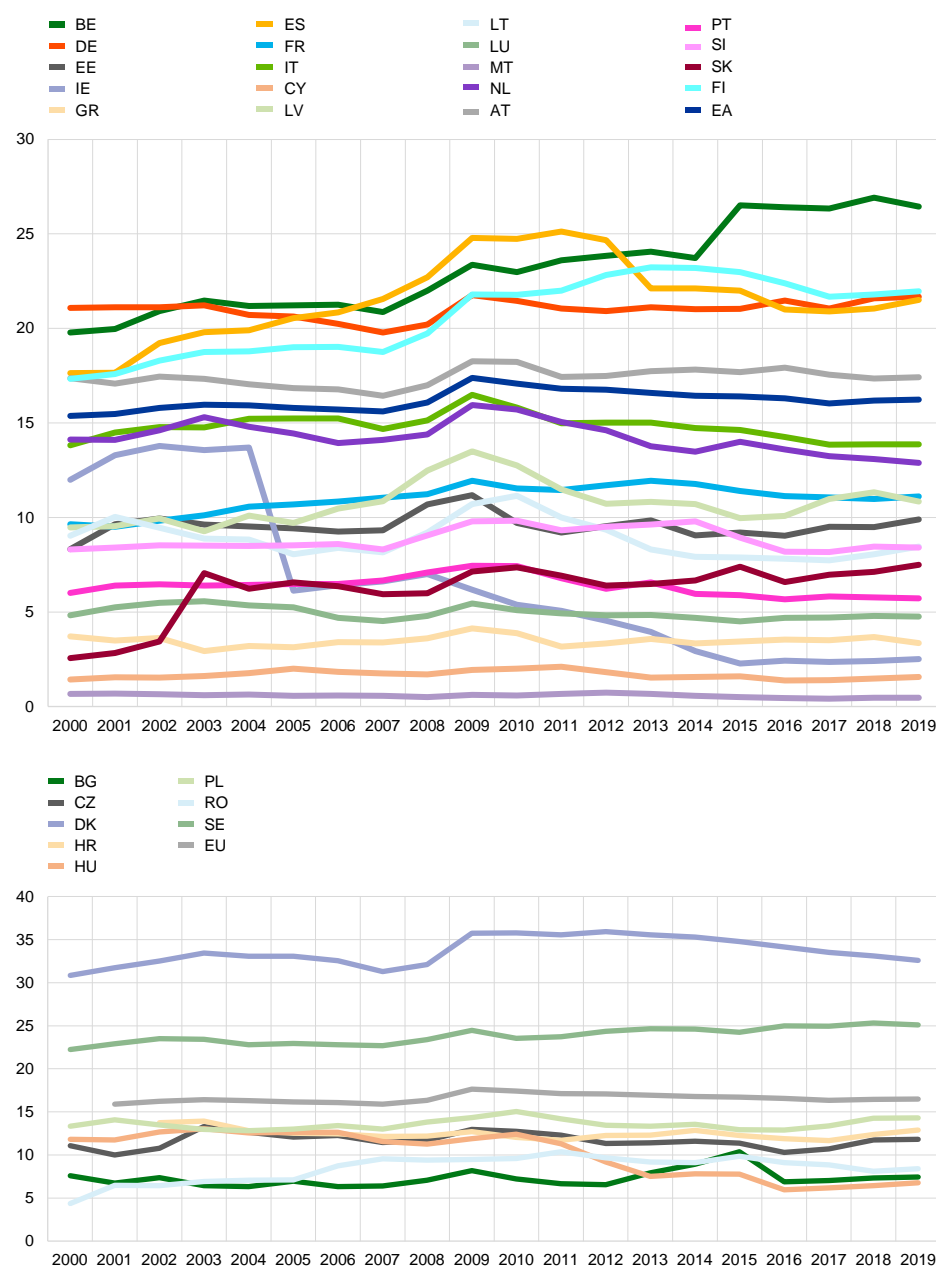
Subnational government expenditure in the euro area accounted for 15.5% of GDP in 2001, peaking just after the start of the crisis in 2009 at 17.4% of GDP, and then declined to just over 16% of GDP in 2019. These fluctuations over time cannot be attributed to changes in one particular function. They are an accumulation of small changes across the different functions of government expenditure.

**Chart 10**

Subnational government expenditure over time

2000-19

(as a percentage of GDP)



Source: Eurostat.

In some individual countries, there have been more pronounced changes. In Belgium, subnational government expenditure increased from 19.8% of GDP in 2000 to 26.4% of GDP in 2019. More than half of this rise was due to an increase in expenditure on social protection, which was partly regionalised after the sixth State reform.<sup>21</sup>

In Spain, government expenditure increased in the pre-crisis years from 17.6% of GDP in 2000 to 21.6% in 2007. It reached a peak during the crisis period at 25.1% of GDP (in 2011) after which it steadily declined to 20.9% in 2017 and then slightly increased to 21.5% in 2019. The rise in expenditure during the crisis period was largely due to an increase in spending on general public services (from 4.1% of GDP in 2007 to 6.1% in 2011 and 7.3% in 2012). After the crisis, subnational government expenditure on general public services declined once again, to 4.9% of GDP in 2019.

In Ireland, subnational government expenditure was 12% of GDP in 2000. It decreased to 6.1% of GDP in 2005, the year in which the Health Service Executive became solely responsible for public health care in Ireland and subnational government health expenditure consequently dropped to 0% of GDP. Subnational government expenditure in Ireland increased to 7.0% of GDP in 2008, before steadily declining to 2.5% in 2019, with the most notable expenditure reductions seen in housing and community amenities, economic affairs and social protection.

In the non-euro area EU, noteworthy developments included the doubling of subnational government expenditure in Romania from around 4.4% of GDP in 2000 to 8.8% in 2017. In Hungary, during the same period, subnational government expenditure fell from almost 12% of GDP in 2000 to 6.2% in 2017.

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<sup>21</sup> See [here](#) for a description of the reform.

## 8 A closer look at subnational government revenue

This section takes a closer look at subnational government revenue. The first issue addressed is the overall weight of other current transfers (from central government) in total subnational government revenue. It then explores the other sources of income of subnational government. This section concludes with a look at government revenue over time.

### 8.1 Sources of revenue

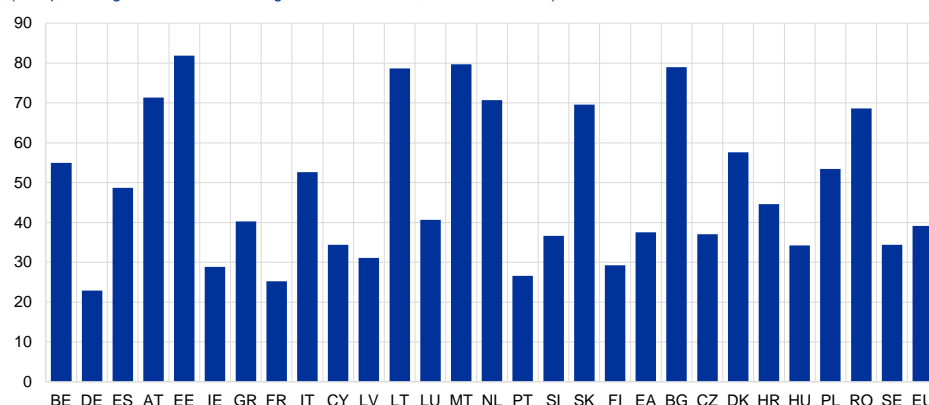
Subnational governments have different sources of income. A significant portion of their income comes from current transfers. The source of these is usually central government. Chart 11 shows the percentage of subnational government revenue that is made up by other current transfers. For the euro area as a whole, this figure is 38% of subnational government revenue. In most euro area countries, the share of other current transfers in total revenue is (much) higher than the euro area average. In Germany, Ireland, France, Cyprus, Latvia, Portugal, Slovenia, and Finland it is, however, below average. For non-euro area EU countries, the share of other current transfers is relatively low in Czech Republic, Hungary, and Sweden.

**Chart 11**

Subnational government current transfers as a share of total subnational government revenue

2019

(as a percentage of total subnational government revenue, non-consolidated)



Source: Eurostat.

Chart 12 shows the other revenue sources of subnational government as a percentage of GDP. In the euro area, this is slightly more than 10% of GDP. In Germany (17% of GDP), Finland (15% of GDP) and Belgium (12% of GDP) revenue sources other than other current transfers are higher than the euro area average. In

the euro area, 70% of these revenue sources are taxes (either direct taxes levied on income and wealth) or indirect taxes (levied on production). In the Netherlands, the income subnational governments receive from sales is higher than tax income, a reflection of the fact that taxation is a highly centralised activity in that country. In Finland, on the other hand, subnational governments receive direct taxes accounting for about 10% of GDP but no indirect taxes. In non-euro area countries, Denmark and Sweden received a relatively high amount of direct taxes (12% and 13% of GDP, respectively) in 2019.

### Chart 12

Breakdown of subnational government revenue sources (other than other current transfers)

2019

(as a percentage of GDP)



Source: Eurostat.

## 8.2 Subnational government revenue over time

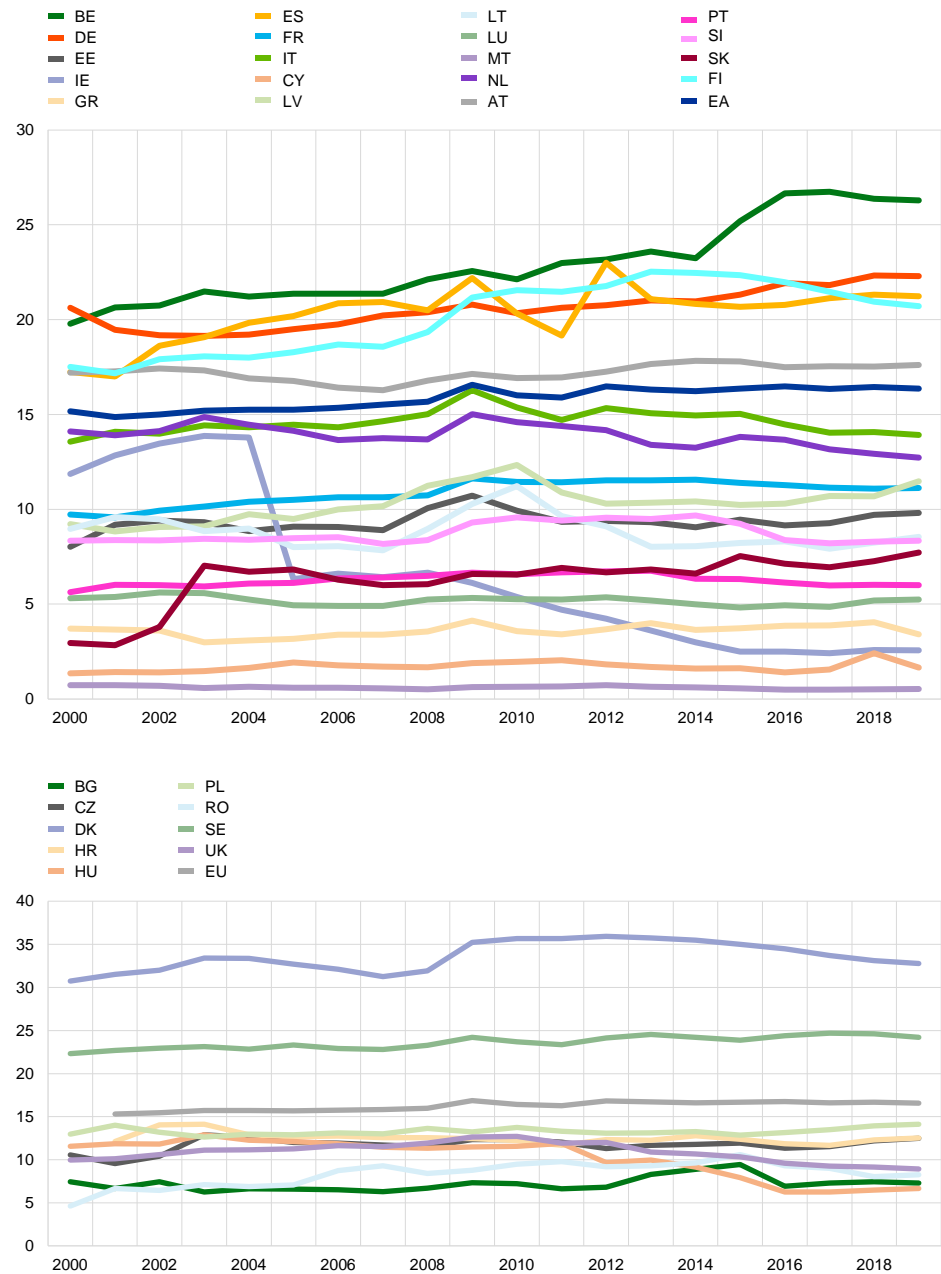
Subnational government revenue in the euro area was just above 15% of GDP in 2000 and it peaked just after the start of the crisis in 2009 at 16.6%. It remained above 16% of GDP in the post-financial crisis period (from 2012).

**Chart 13**

Subnational government revenue over time

2000-19

(as a percentage of GDP)



Sources: Eurostat.

In some individual countries there have been more pronounced movements. In Belgium, subnational government revenue increased from 19.8% of GDP in 2000 to 26.3% in 2019. The rise in revenue was partly due to the increase in other current transfers received but also due to higher taxes received. In 2015 and 2016 a state reform was implemented that broadened the competence of communities and the taxation powers of regions

In Ireland, the healthcare reform discussed in the previous section also led to a reduction in subnational government revenue. The expenditure reductions in housing and community amenities, and social protection, were matched by lower other current transfers received (most likely from central government).

In Spain, subnational government revenue stood at 17.2% of GDP in 2000 and increased to 20.9% of GDP in 2007. In 2011 (the year in which subnational government expenditure in Spain peaked at 25.1% of GDP), subnational government revenue declined to 19.2% of GDP before rising to 23.0% in 2012. This was mainly due to the timing of other current transfers (probably from central government). In the post-crisis years, government revenue declined to 21.2% of GDP in 2019.

Outside the euro area, movements in subnational government revenue in Denmark are particularly noteworthy. In the first year of the crisis (2008), subnational government revenue was almost 32% of GDP. From 2009 to 2015 it remained above 35% and then declined to 32.8% in 2019. This was mainly due to the movement in other current transfers received (probably from central government).

In Hungary, subnational government revenue declined in 2012 to just below 10% of GDP whereas in the previous years it had always been between 11% and 13% of GDP. In 2019, it stood at just 6.7%. This decline, as in Denmark, was related to the decrease in other current transfers received (probably from central government).



## 9 Conclusion

The subnational government cumulated deficit for the euro area and the EU aggregate remained more or less at the same level, i.e. over 3% of GDP, in both the pre-crisis and financial crisis periods. However, austerity measures in the post-crisis period turned the cumulated aggregated deficit into a minor surplus in both the euro area and the EU. These figures conceal the movements in individual countries, as a few also still reported higher deficits in the post-crisis period, whereas most EU Member States improved their deficit/surplus figures.

The share of subnational government expenditure and revenue depends on the degree of decentralisation of government functions. The type of government functions that are decentralised can be varied. The largest source of subnational government revenue is other current transfers, which are usually received from central government.

Subnational government expenditure and revenue peaked in the euro area after the start of the crisis but have since returned to pre-crisis levels. Subnational government revenue in the euro area is now slightly higher than it was before the crisis, which implies an overall improvement in the subnational government balance over time. Subnational government debt also peaked during the financial crisis but has also returned to pre-crisis levels. Subnational government debt could have been even higher if subnational governments had not resorted to other measures, such as taking more time to pay their outstanding bills. These trade credits are not part of the official measure of government debt in the EU and are a way of financing expenditure without increasing debt.

Subnational government holdings of financial assets increased in the euro area during the crisis, possibly also due to measures to support the financial industry. Overall, net financial worth declined during the crisis. It has increased (or rather become less negative) in the post-crisis years and is almost back to pre-crisis levels in the euro area as a whole, despite the diverging trends across countries.

As clearly shown in Box 3, the full consolidation of subnational government financial assets, revenue and expenditure was not possible as the detailed information required to do so was not available.<sup>22</sup> Also, more recent information on fiscal rules for subnational governments in Europe could be collected to help interpret the data.

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<sup>22</sup> Although it would be useful to have this information for the sake of completeness, the authors understand that the reporting burden on statistical authorities would unduly increase if the reporting of this information were to be made mandatory.

# Annex

The **sources and methods** for the DDA tables are as follows.

*Total* – the deficit plus the change in debt as compared with the last year using annual data as reported under the ECB Guideline on government finance statistics (ECB/2018/13).

*Pillar 1* – main financial assets using quarterly data from ESA transmission programme Table 27 as published by Eurostat.

*Pillar 2* – valuation effects and other changes in volume are not available for the subnational government subsector and are calculated residually, i.e. the total minus Pillar 1 and Pillar 3.

*Pillar 3* – time of recording differences and remaining factors consists of transactions in other financial assets not included in main financial assets minus transactions in financial liabilities not included in (Maastricht) debt (from ESA 2010 transmission programme Table 27) and the difference in net lending/net borrowing between the non-financial (ECB GFS guideline) and financial accounts (ESA 2010 Table 27). Thus, Pillar 3 includes a mixture of quarterly data (from Table 27) and annual data (from the ECB GFS guideline).

**The detailed composition of the DDA is presented below in three tables, one for each period.**

**Table A****DDA of subnational governments in the period 2000-07**

(percentage of GDP, aggregated over the period 2000-07)

	Deficit-debt adjustment 2000-2007							
	Total	PILLAR 1					PILLAR 2	PILLAR 3
		Transactions in main financial assets				Valuation effects and other changes in the volume of debt	Time of recording and other differences	
		Currency and deposits	Debt securities	Loans	Equity and investment fund shares			
BE	1.7	2.3	1.2	0.2	0.6	0.3	-0.6	0.0
DE	-1.0	1.3	0.5	0.2	0.0	0.7	-0.5	-1.9
ES	0.6	3.8	3.5	0.0	0.0	0.3	-0.3	-2.9
AT	1.7	3.2	0.9	0.0	0.4	2.0	0.0	-1.5
EE	-0.5	-0.4	0.7	0.0	0.0	-1.1	0.0	-0.1
IE	2.0	1.3	0.1	0.3	1.0	0.0	-0.3	1.0
GR	0.8	0.3	0.2	0.0	0.0	0.0	0.0	0.5
FR	1.0	0.4	0.6	-0.1	-0.2	0.1	0.0	0.6
IT	0.1	1.9	0.8	0.0	0.3	0.8	0.1	-1.9
CY	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1
LV	1.3	2.6	2.1	0.0	0.2	0.4	0.4	-1.8
LT	-0.3	0.0	0.4	0.0	0.0	-0.5	-0.1	-0.2
LU	2.4	2.1	2.1	0.0	0.0	0.0	0.0	0.3
MT	0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.3
NL	-2.7	-1.5	0.9	0.2	-1.6	-1.0	0.0	-1.2
PT	1.1	0.7	0.4	0.0	0.1	0.3	0.4	0.0
SI	0.1	0.5	0.7	0.0	-0.1	-0.1	0.0	-0.3
SK	3.0	1.6	1.2	0.0	0.0	0.4	0.0	1.4
FI	-0.6	0.8	0.5	0.2	-0.2	0.3	0.0	-1.4
EA	0.0	1.4	0.9	0.1	0.0	0.4	-0.2	-1.2
BG	0.2	0.2	1.7	0.0	0.0	-1.4	0.0	-0.1
CZ	-0.1	1.2	2.6	-1.4	0.1	-0.1	0.1	-1.4
DK	1.7	4.3	0.8	0.2	0.2	3.1	0.5	-3.1
HR	na	na	na	na	na	na	na	na
HU	0.2	0.9	1.3	-0.3	0.1	-0.2	0.0	-0.8
PL	0.7	0.2	0.2	0.0	0.1	-0.1	-0.4	0.9
RO	2.6	1.5	1.6	0.0	0.0	0.0	0.5	0.6
SE	2.7	4.3	0.6	0.7	3.0	0.0	0.8	-2.3
EU	na	na	na	na	na	na	na	na

Sources: Eurostat and ESCB.

**Table B****DDA of subnational governments in the period 2008-12**

(percentage of GDP, aggregated over the period 2008-12)

	Deficit-debt adjustment 2008-12							
	Total	PILLAR 1					PILLAR 2	PILLAR 3
		Transactions in main financial assets					Valuation effects and other changes in the volume of debt	Time of recording and other differences
		Currency and deposits	Debt securities	Loans	Equity and investment fund shares			
BE	4.0	4.4	1.8	-0.7	1.9	1.5	0.4	-0.8
DE	6.2	4.8	1.2	1.4	0.5	1.7	1.6	-0.3
ES	-3.5	-1.8	-1.9	0.0	0.1	0.0	-0.1	-1.6
AT	1.7	2.1	0.4	0.5	1.1	0.0	0.0	-0.4
EE	0.0	-0.1	0.0	0.0	0.0	-0.1	0.0	0.1
IE	0.1	0.1	0.3	-0.2	0.0	0.0	0.0	0.0
GR	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1
FR	0.8	0.7	0.7	-0.1	0.0	0.0	0.0	0.1
IT	-0.3	0.0	-0.1	0.0	0.0	0.1	0.0	-0.3
CY	-0.2	-0.2	-0.2	0.0	0.0	0.0	0.0	0.0
LV	-1.3	0.2	0.0	0.0	0.0	0.2	-0.4	-1.1
LT	-0.1	0.1	0.2	0.0	0.0	0.0	-0.1	-0.1
LU	1.7	0.8	0.7	0.0	-0.1	0.2	0.0	0.9
MT	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-0.1
NL	-1.8	-1.5	0.2	1.3	0.2	-3.2	0.0	-0.3
PT	-0.5	-0.1	-0.1	-0.1	0.0	0.0	0.4	-0.8
SI	0.0	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.1
SK	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.1	0.1
FI	-0.4	0.3	0.8	-0.7	0.8	-0.6	0.0	-0.8
EA	1.5	1.4	0.4	0.4	0.3	0.3	0.4	-0.4
BG	-0.1	0.5	0.6	0.0	0.0	-0.1	0.0	-0.7
CZ	-0.9	0.1	0.2	-0.1	0.0	0.0	0.0	-1.0
DK	0.7	1.7	-0.5	0.8	0.8	0.6	0.0	-1.0
HR	0.8	-0.7	-0.6	0.0	0.0	0.0	0.6	0.9
HU	1.0	-0.1	0.1	-0.1	0.0	0.0	0.9	0.2
PL	-0.7	-0.1	-0.1	0.0	0.2	-0.1	0.1	-0.7
RO	-1.4	-0.3	-0.3	0.0	0.0	0.0	0.2	-1.3
SE	2.0	2.6	0.2	0.3	1.7	0.6	0.3	-0.9
EU	1.3	1.3	0.3	0.4	0.3	0.3	0.4	-0.4

Sources: Eurostat and ESCB.

**Table C****DDA of subnational governments in the period 2013-19**

(percentage of GDP, aggregated over the period 2013-19)

	Deficit-debt adjustment 2013-19							
	Total	PILLAR 1					PILLAR 2	PILLAR 3
		Transactions in main financial assets					Valuation effects and other changes in the volume of debt	Time of recording and other differences
		Currency and deposits	Debt securities	Loans	Equity and investment fund shares			
BE	1.7	1.4	0.3	0.0	2.0	-0.9	1.6	-1.3
DE	0.1	-0.1	0.7	-0.3	-0.9	0.4	0.3	-0.1
ES	4.4	1.9	1.9	0.0	0.1	0.0	0.0	2.4
AT	1.0	0.6	1.0	-0.6	0.2	-0.1	0.1	0.3
EE	0.6	0.9	0.8	0.0	0.0	0.1	0.2	-0.4
IE	0.5	0.1	-0.5	0.7	-0.1	0.0	0.0	0.3
GR	1.8	1.3	0.9	0.0	0.4	0.0	0.0	0.5
FR	1.1	0.6	0.6	0.0	0.1	0.0	0.0	0.5
IT	0.9	-0.1	0.0	-0.2	0.0	0.0	0.2	0.8
CY	0.0	0.2	0.2	0.0	0.0	0.0	0.0	-0.2
LV	1.5	1.0	0.9	0.0	0.0	0.1	0.2	0.3
LT	0.8	0.5	0.6	0.0	0.0	0.0	0.3	0.0
LU	2.0	2.4	2.2	0.0	0.0	0.2	-0.1	-0.2
MT	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0
NL	-1.0	-1.6	0.8	-1.1	-1.1	-0.1	-0.1	0.6
PT	1.8	1.0	1.1	0.0	0.0	-0.1	0.2	0.7
SI	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.2
SK	1.4	1.2	1.2	0.0	0.0	0.1	0.1	0.1
FI	-0.2	0.9	0.7	0.0	0.0	0.2	-0.2	-0.9
EA	1.0	0.3	0.7	-0.2	-0.2	0.1	0.2	0.5
BG	0.1	0.2	0.2	0.0	0.0	-0.1	0.0	0.0
CZ	3.4	3.7	3.7	0.0	0.0	0.0	0.0	-0.3
DK	2.8	1.2	0.0	0.4	-0.2	0.9	0.7	1.0
HR	0.2	0.6	0.7	0.0	0.0	-0.1	0.3	-0.7
HU	1.6	3.3	2.7	0.7	-0.1	-0.1	0.1	-1.8
PL	0.2	0.5	0.5	0.0	0.1	-0.1	0.0	-0.4
RO	1.7	1.1	1.1	0.0	0.0	0.0	0.1	0.6
SE	3.3	4.5	0.5	0.0	3.1	0.9	0.6	-1.7
EU	1.0	0.5	0.7	-0.2	-0.1	0.0	0.2	0.3

Sources: Eurostat and ESCB.

# Abbreviations

## Countries

<b>BE</b>	Belgium	<b>LT</b>	Lithuania
<b>BG</b>	Bulgaria	<b>LU</b>	Luxembourg
<b>CZ</b>	Czech Republic	<b>HU</b>	Hungary
<b>DK</b>	Denmark	<b>MT</b>	Malta
<b>DE</b>	Germany	<b>NL</b>	Netherlands
<b>EE</b>	Estonia	<b>AT</b>	Austria
<b>IE</b>	Ireland	<b>PL</b>	Poland
<b>GR</b>	Greece	<b>PT</b>	Portugal
<b>ES</b>	Spain	<b>RO</b>	Romania
<b>FR</b>	France	<b>SI</b>	Slovenia
<b>HR</b>	Croatia	<b>SK</b>	Slovakia
<b>IT</b>	Italy	<b>FI</b>	Finland
<b>CY</b>	Cyprus	<b>SE</b>	Sweden
<b>LV</b>	Latvia		

In accordance with EU practice, the EU Member States are listed in this report using the alphabetical order of the country names in the national languages.

## Others

<b>EA</b>	euro area
<b>ECB</b>	European Central Bank
<b>EDP</b>	excessive deficit procedure
<b>ESA 2010</b>	European System of Accounts 2010
<b>ESCB</b>	European System of Central Banks
<b>EU</b>	European Union (in this paper excluding the United Kingdom for all periods under consideration)
<b>EUR</b>	euro
<b>GDP</b>	gross domestic product

## Conventions used in the tables

“-” data do not exist/data are not applicable

“.” data are not yet available

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