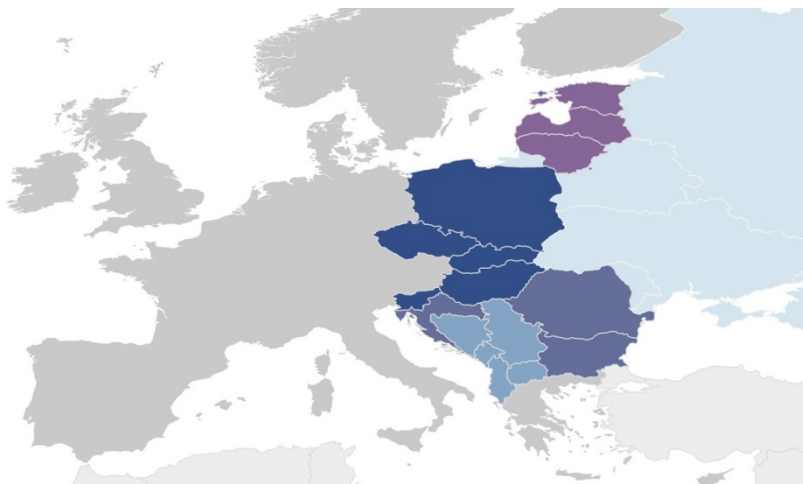


# **Financialization of the state in postsocialist East-Central Europe: analysis of secondary quantitative data**

Marek Mikuš

2019

Version: Final



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## GEOFIN Working Paper No. 4

### **Financialization of the state in postsocialist East-Central Europe: analysis of secondary quantitative data**

Marek Mikuš

#### **Abstract:**

This working paper makes first exploratory steps in GEOFIN's empirical study of the financialization of the state in eleven European Union member states in postsocialist East-Central Europe (ECE-11). Following a description of the geographic, historical and political economic context of ECE-11, the core of the paper is a descriptive and comparative analysis of internationally comparable secondary quantitative data of relevance for the financialization of states in ECE-11. Synthetic conclusions draw out the key patterns and trends and suggest a more limited set of national-level case studies to be researched in-depth in the future.

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## Contents

1. Introduction .....	7
2. Geographic, historical and political economic context .....	7
3. Monetary and fiscal policy .....	10
3.1. Monetary policy .....	10
3.1.1. Indicators of capital inflows .....	10
3.1.2. Indicators of carry trade activity.....	14
3.1.3. Other indicators of a financialized monetary regime .....	17
3.2. Fiscal policy and public debt .....	21
4. Public-service provision: pension systems .....	28
5. Lawmaking and regulation: offshore centres .....	29
6. Investment policy: state ownership of financial assets.....	30
7. Discussion and conclusions .....	33
9. Statistical Annex .....	39
Table 1. Financial account balance as a share of GDP, 1995–2017 .....	39
Table 2. Current account balance as a share of GDP, 1995–2017 .....	41
Table 3. Daily average volume of FX trading, mil. USD, April 1998 – April 2016.....	44
Table 3.1. Daily average volume of FX trading as a share of GDP, April 1998 – April 2016 .....	45
Table 4. Daily average volume of FX trading by instrument, mil. USD, 1998–2016 .....	47
Table 5. Share of non-residents in FX swaps trading daily average volume, mil. USD, 1998–2016 .....	50
Table 6. Share of short-term (<7 days) maturity instruments in FX swaps trading daily average volume, 1998–2016 .....	52
Table 7. Official international reserves, mil. USD, 1990–2017 .....	54
Table 7.1. Official international reserves as a share of GDP, 1990–2017 .....	56
Table 8. Financial openness index, 1990–2016.....	59
Table 9. Consumer price inflation, annual change (%), 1990-2016.....	60
Table 10. Real effective exchange rate index (2010=100%), 1990–2017 .....	62
Table 11. Central government-issued collateral in the European repo market (share of outstanding), 2002–17 .....	63
Table 12. Gross consolidated general government debt as a share of GDP, 1995-2017. 65	
Table 13. Gross government debt by subsector of government as a share of GDP, 1995–2017 .....	67
Table 14. General government debt by residual maturity as a share of GDP, 1995–2017	71

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 .....	76
Table 16. Interest payable on general government debt as a share of GDP, 1995–2017 .....	85
Table 17. Share of general government debt held by non-residents, 1995–2017 .....	86
Table 18. Share of FX debt in general government debt, 1995–2017 .....	87
Table 19. Investment in funded pension arrangements as a share of GDP, 2001–17 .....	88
Table 20. Net FDI positions with offshore centres, mil. EUR, 2008–17 .....	89
Table 21.1. Total general government holdings of financial assets as a share of GDP, 1998–2017 .....	90
Table 21.2. Government holdings of equity as a share of GDP, 1998–2017 .....	91
Table 21.3. Government holdings of other accounts receivable as a share of GDP, 1998– 2017 .....	92
Table 21.4. Government holdings of currency and deposits as a share of GDP, 1998–2017 .....	93
Table 21.5. Government holdings of loans as a share of GDP, 1998–2017 .....	94
Table 21.6. Government holdings of debt securities as a share of GDP, 1998–2017 .....	95
Table 21.7. Government holdings of financial derivatives and employee stock options as a share of GDP, 1998–2017 .....	96

## 1. Introduction

GEOFIN Working Paper No. 3 (Mikuš 2019) has laid out a conceptual framework for GEOFIN's analysis of the financialization of the state in eleven European Union member states in postsocialist East-Central Europe (ECE-11) and operationalized it for the purposes of analysis of internationally comparable secondary quantitative data. This working paper proceeds to the actual descriptive and comparative analysis of available secondary data on ECE-11. Following a brief description of geographic, historical and political economic context of ECE-11, the core of the paper is composed of the analysis of data on the following dimensions of state financialization in ECE-11 (and in comparison with the Western European core): monetary and fiscal policy (including public debt); public-service provision (with a focus on pension systems); lawmaking and regulation (with a focus on relationships with offshore centres); and investment policy. Throughout this section, references are made to the extensive Statistical Annex. Synthetic conclusions draw out the key patterns and trends and suggest a more limited set of national-level case studies to be researched in-depth in the future.

## 2. Geographic, historical and political economic context

ECE-11, our aggregate geographic unit of analysis, includes all postsocialist member states of the European Union (EU): Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. This space between Adriatic, Baltic and Black Seas, while continuous, encompasses (parts of) several commonly recognized geographic, historical, political and/or economic regions (which can be operationalized as country clusters) within East-Central Europe as well as South East Europe. To begin with, ECE-11 includes eight states that entered the EU in 2004. In addition to Slovenia, this includes two subregions within East-Central Europe: the Visegrád Four (V4) group of states (Czechia, Hungary, Poland and Slovakia), which run a (relatively low-key) mechanism of intergovernmental cooperation and coordination, and the three post-Soviet Baltic states (Estonia, Latvia and Lithuania). Two of the remaining ECE-11 states, Slovenia and Croatia (year of EU accession: 2013), are former constituent republics of the socialist federal Yugoslavia.<sup>1</sup> Completing the ECE-11 group of states, Romania and Bulgaria entered the EU

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<sup>1</sup> The remaining post-Yugoslav states – Bosnia and Herzegovina, Kosovo (which is a partially recognized state), Montenegro, Northern Macedonia and Serbia – are in various stages of the EU integration process. Together with Albania, they are part of the fairly recently invented geopolitical category of “Western Balkans” used especially by the EU, international organizations

in 2007. Bulgaria is the only country in this group that has an unambiguously and fully South East European (or Balkan) status in regional classifications of Europe. Croatia, Slovenia and Romania are more ambiguous cases with competing (often external versus self-) classifications as, on the one hand, “Central (or East-Central) Europe”, or on the other, “Balkans/South East Europe”. Croatia and Romania are alternatively characterized as internally split between the regions.

There are numerous other lines of division. Five of the ECE-11 states use the euro – Slovenia since 2007, Slovakia since 2009, Estonia since 2011, Latvia since 2014 and Lithuania since 2015. In Czechia, Hungary and Poland, the political appetite for euro adoption is currently low or nonexistent while political elites in Bulgaria, Croatia and Romania appear more eager but struggle with convergence criteria. All these countries were socialist before 1989, but while former Yugoslavia had its own foreign policy that did not follow the Cold War lines of divisions, all the remaining countries were part of either the Soviet Union directly (the three Baltic states) or the Soviet-dominated Warsaw Pact bloc. Czechia and Slovakia were a federation first established in 1918 and dissolved in 1993. Historically, Czechia, Slovakia, Hungary, Slovenia and parts of Croatia, Romania and Poland were part of the Habsburg Empire while Bulgaria, Croatia, Hungary and Romania were to various degrees and for various periods of time controlled by the Ottoman Empire. Czechia, Slovakia, Poland, Croatia, Slovenia and Bulgaria are majority Slavic countries (with various degrees of mutual linguistic intelligibility and perceived ethnic “closeness”), while Latvia and Lithuania are majority Baltic countries and the titular nations and languages in Estonia, Hungary and Romania are only distantly related to other titular nations and languages in the group. Romania and Bulgaria are majority Orthodox Christian countries, Poland, Slovakia, Croatia, Slovenia and Lithuania are majority Catholic, Hungary has a Catholic plurality, Latvia has a Lutheran plurality, and Estonia and Czechia are majority atheist. Most of the ECE-11 countries have large established ethnic and religious minorities, except perhaps Poland, Slovenia and Czechia though these have many recent migrants from neighbouring countries (e.g. Ukrainians in Poland, Slovaks in Czechia, people from other parts of former Yugoslavia in Slovenia). Sizable minorities include Roma in Slovakia, Hungary, Romania and Bulgaria, Russians in the Baltic countries, Hungarians in Slovakia and Romania, Turks in Bulgaria, and Serbs in Croatia.

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and as well as some scholarship (such as mainstream political science). Croatia and Slovenia also used to be considered part of Western Balkans before their EU accession, which suggests that this is a residual category defined by EU non-membership. The position of the Western Balkans within the European geography of uneven development increasingly resembles one of a “super-periphery” (Bartlett and Prica 2013).



Finally, while all ECE-11 countries underwent transition to capitalism and parliamentary democracy since 1989, the trajectories of their political, economic and social transformation and development varied considerably. One already noted source and manifestation of variation was the different pace of their EU integration and the intensity of their subsequent further integration into the European Monetary Union (EMU) through euro adoption or non-adoption. An influential classification of postsocialist capitalist regimes in the region, which is particularly suitable for our purposes as it considers the same ECE-11 group of states, was developed by Bohle and Greskovits (2012). Drawing on the Varieties of Capitalism school as well as Polanyi's more holistic analysis of the relationships between politics, market and society, Bohle and Greskovits (2012: 17–25) classified the ECE-11 countries in the following manner:

- pure neoliberal regime in Estonia, Latvia and Lithuania, characterized by a strongly neoliberal, market-led orientation and relatively effective stability-producing macroeconomic coordination (monetary and fiscal policy), minimal welfare states and corporatist structures, and a high degree of political exclusion (towards the Russian minorities);
- embedded neoliberal regime in the Visegrád group, characterized by an equally marketized and transnationalized political economy but with relatively more robust welfare states, higher degree of political inclusion, and less effective macroeconomic coordination than in the Baltic group;
- neocorporatist regime in Slovenia, which emerged from the least radical marketization and internationalization and is characterized by the most developed welfare state and corporatist structures in the ECE-11 group, resulting in best economic and human development indicators;
- and a “nonregime” in Bulgaria, Croatia and Romania, characterized by a generally neoliberal orientation but with even weaker states and democracies than the Baltic group (though with somewhat more developed corporatist structures), manifesting in minimal welfare systems (which needs to be qualified for Croatia with its generous support for war veterans), poor macroeconomic coordination, democratic participation and accountability, and overall the worst performance among the countries in the group.

All in all, ECE-11 is a heterogeneous and to some extent “arbitrary” geographic space and set of nation-states. However, their shared postsocialist heritage and EU membership constitute two strong foundations for comparability and analytical focus on relationships between, on the one hand, financialization, and on the other, postsocialist transformation and EU integration. At the same time, the various subregional, eurozone/non-

eurozone and capitalist regime distinctions represent opportunities for intra-group comparisons and consideration of the implications of variegated financialization patterns for the existing typologies, such as the one suggested by Bohle and Greskovits.

### **3. Monetary and fiscal policy**

#### **3.1. Monetary policy**

##### *3.1.1. Indicators of capital inflows*

I begin my analysis with Eurostat balance of payments (BoP) data. As previously noted (Mikuš 2019), existing accounts of peripheral financialization in the region associate it with large foreign debt-creating capital inflows during the credit boom in the run-up to the 2007–8 global financial crisis. Such inflows might be expected to manifest in two balance of payments indicators: directly in capital account surpluses, and tentatively and in a more indirect manner in current account deficits, theorized as resulting from the capital inflows–driven appreciation of domestic currency that favours imports and erodes domestic production and export capacities.

Eurostat BoP data for ECE-11 countries begin from 1995 but it is only from 2004 that they are available for all ECE-11 countries. As imperfect but mutually complementary approximations for the Western European core to be compared with ECE-11, I use averages for EU-15<sup>2</sup> as well as data on Germany as the largest Western European core country and one that exports its financialization (Eichacker 2015), unlike ECE-11 countries which import it. To gain a scale of the significance of these BoP indicators for each national economy, I examine them as a share of national Gross Domestic Product (GDP). It is further crucial to note the classification of sub-balances of BoP aggregates as per the Eurostat methodology. The classification is not binary (current account and capital account) but ternary: current account, capital account and financial account. Current account includes flows of goods, services, primary income and secondary income. Capital account covers all transactions that involve (a) the receipt or payment of capital transfers (debt forgiveness, non-life insurance claims, investment grants, one-off guarantees and other debt assumption, capital taxes and other capital transfers) or (b) the acquisition/disposal of non-produced, non-financial assets, which includes transactions associated with tangible assets (e.g. land and subsoil assets)

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<sup>2</sup> EU-15 is the composition of the EU prior to the accession of the eight postsocialist countries, Cyprus and Malta in 2004. It includes the following fifteen countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

and transactions associated with intangible assets (e.g. patents, copyrights, trademarks, franchises etc.). Finally, financial account covers all transactions associated with changes of ownership in the foreign financial assets and liabilities of the economy. It is broken down into five basic functional categories: direct investment, portfolio investment, financial derivatives and employee stock options, other investment (one of the subcategories is loans) and official reserve assets (Eurostat 2018a). In other words, Eurostat's definition of financial account includes the bulk of transactions that are considered as part of "capital account" in dual classifications of BoP sub-balances (those recognizing current account and capital account only), which means that it includes precisely those transactions that are of particular relevance for financialization. For most countries in this Eurostat data set, the scale of capital account balances is significantly smaller than the one of financial account balances. Therefore, I omit data on capital account balances and instead look at financial account balances. In addition, to the extent that financial account balance is not defined as net credit/balance (as it is the case for current and capital account balances) but rather as net acquisition of assets/incurrence of liabilities, it follows that in this context the equivalent of capital account surplus in the dual BoP classification, which indicates capital inflows, is financial account deficit, i.e. net incurrence of liabilities.

Table 1 shows **financial account balances** of ECE-11 states, EU-15 and Germany.<sup>3</sup> A difference between the ECE-11 countries, on the one hand, and EU-15 and Germany, on the other hand, is immediately apparent. While Germany experienced net acquisition of assets in almost all years both before and after the global financial crisis, ECE-11 countries consistently experienced net incurrence of liabilities before the crisis and either a reduced net incurrence of liabilities or a moderate net acquisition of assets after the crisis, though the scale of acquisitions in all such cases in ECE-11 was lower than the one in Germany. The difference is less striking in comparison with EU-15, but the pattern was broadly similar: on average, EU-15 countries ran lower financial account deficits or higher financial account surpluses than ECE-11 with the exception of six years (2009–10, 2012 and 2014–16). Average financial account deficits in ECE-11 were the deepest in two periods before the crisis: in 1998–99 and especially 2002–8 with a climax in 2007. They were substantially reduced or even reversed into capital outflows after the crisis.

Financial account deficits before the crisis represented particularly large shares of GDP in Croatia, Bulgaria (the record value in the group in any given year: more than -32% in 2007), Romania and the Baltic countries (Latvia peaked at almost -20% in 2007), suggesting

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<sup>3</sup> Some of the relevant data for 1995–2007 were not available in the Eurostat database. Eurostat data were therefore supplemented with IMF/WB data. This resulted in a complete data set for ECE-11 and a limited number of missing yearly data for some of the EU-15 countries. In such cases, EU-15 averages were computed with all available data for the given year.

most pronounced capital inflows. In these countries, the reversals of capital flows after the crisis were most dramatic and earliest in ECE-11 – Latvia went from a -12.6% deficit in 2008 to a 11.9% surplus in 2009. In contrast, the scale of inflows before the crisis was less pronounced in the Visegrád countries and Slovenia, though the two Visegrád countries with largest inflows were comparable with Croatia and Romania – while average financial deficit in 2004–8 was -9.3% in Croatia and -9.6% in Romania, it was -7% in Slovakia and -8.5% in Hungary. Overall, then, the scale of capital inflows and the cyclicity of external flows seems to be higher in pure neoliberal regimes and nonregimes in Bohle's and Greskovits' typology and lower in embedded neoliberal regimes and the neocorporatist regime of Slovenia.

After the crisis, only two countries registered financial account deficits in most years: Poland and Slovakia, though in Poland the balance has oscillated around zero in three most recent years. Interestingly, Slovakia and Poland are also the two countries that display the highest pace of growth of household debt in the EU in the post-crisis years. The second highest financial account surplus in ECE-11 after Latvia's one-off record in 2009 was reached by Bulgaria (8.6% in 2016). This, together with huge deficits of these two countries before the crisis, suggests a particularly cyclical pattern of financialization. In 2009–17, fiscal account surpluses were on average largest in Estonia (3.9%), followed by Hungary and Latvia (both around 3.1%), Bulgaria (2.6%) and Lithuania (2.3%). Four countries maintained average financial account deficits in this period: Poland (-2.3%), Slovakia (-2%), Romania (-1.3%) and Croatia (-0.4%). The average financial account surplus for this entire period and the whole ECE-11 group was nearly 1%. The value was slightly lower at 0.8% for EU-15 but it stood at 6.6% for Germany. Overall, the values of this indicator in the post-crisis period are more ambiguous and cut across Bohle's and Greskovits's typology of capitalist regimes somewhat more than those in the pre-crisis period, though the nonregimes (except Croatia) and Baltic countries are again grouped in one part of the ranking, confirming the thesis about their heightened tendency to cyclicity. What is certain is that we do not see a return to the pattern of capital inflows visible in the 2000s.

Data on **current account balances** in Table 2 are taken from the Eurostat database and supplemented with data from the IMF database for the particular years and countries for which Eurostat data was not available. Once again, the difference between ECE-11 countries, on the one hand, and EU-15 and Germany, on the other hand, is immediately apparent. On average, EU-15 recorded surpluses in all years except four years during the crisis (2007–10). The surpluses were generally moderate throughout but they increased in most recent years compared to the pre-crisis period. While Germany displayed relatively small current account deficits up to 2001, it has had surpluses, sometimes quite large (in particular in most recent years), ever since. ECE-11 countries, in contrast, ran current

account deficits quite consistently until the 2007–8 financial crisis. The only notable exception to this pattern, disregarding one or two surplus years in the 1990s in Bulgaria and Slovakia, is Slovenia with frequent surpluses (albeit small and not after 2003) even before the crisis as well as some of the largest surpluses in the group since the crisis. The ordering of the states according to levels of current account deficit in this period is similar to the ordering based on the level of financial account deficits. In 2002–8, roughly the peak of the credit boom in Eastern Europe, the average current account deficit was highest in Latvia (-12.8% of GDP) followed by Bulgaria (12.7%), Estonia (-11.9%), Lithuania (-9.6%) and Romania (-8.8%). Import dependence and external asymmetries were therefore again most pronounced in the Baltic countries and two of the “nonregimes”. In the Visegrád group, deficits were again deeper in Slovakia (-7.8%) and Hungary (-6.5%) than Poland (-4.3%) and the Czech Republic (-3.7%). Croatia (-6.6%) was this time positioned in the middle of this subgroup. Slovenia recorded the lowest average current account deficit in this period (-2.2%).

Similarly to financial account balances, trends of current account balances in the period after the crisis (2009–17) are more ambiguous and cut across Bohle’s and Greskovits’s typology more than during the pre-crisis period. While only four states continued to run an average financial account deficit in 2009–17, in case of current account deficit it was seven; however, the deficits were smaller than in the previous period in all ECE-11 countries. This suggests that import dependence is more entrenched in the political economies of ECE-11 countries than dependence on capital inflows and presumably depends on a range of factors, so that a reversal of capital inflows may not suffice to end current account deficits. Three of the countries with an average financial account deficit in 2009–17 also had largest current account deficits in the same period, which suggests that there nevertheless *is* an association between the two: Romania (-3.1%), Poland (-2.5%) and Slovakia (-1.6%). Bulgaria, Czechia, Latvia and Lithuania also recorded an average deficit. Slovenia had the largest current account surplus (3.2%), followed by Hungary (2.2%), Estonia (1.3%) and Croatia (0.7%). In the post-crisis period, Hungary and Estonia thus notably reversed both their financial account deficits and current account deficits. Still, with the exception of Slovenia, the scale of post-crisis current account surpluses was significantly smaller than the one of pre-crisis deficits, similarly to the difference between financial account post-crisis surpluses and pre-crisis deficits. The average current account surplus in 2009–17 was 1.4% in EU-15 and 7.1% in Germany, compared to only 0.1% in ECE-11. The gap between ECE-11 and the Western European core has thus narrowed considerably compared to the pre-crisis period but it continues to persist.

### 3.1.2. *Indicators of carry trade activity*

Next I look at indicators of carry trade activity discussed as prominent in the financialization processes in the region. Unfortunately, data on cross-currency interest rate differentials is not freely available. Table 3 presents the Bank of International Settlement (BIS) data on **average daily volumes of foreign exchange trading** in all ECE-11 countries except Croatia, for which data is not available (data for Slovenia, where the market seems to have always been very small, is also missing after 2010), as well as for the EU-15 aggregate. The averages are available for April of every third year starting from April 1998 and ending with April 2016. This indicator does not directly confirm the presence and intensity of carry trade but it gives an idea of the scope of foreign exchange trading in each country and also the dynamics of its growth or decline. I used World Bank data on GDP in USD at current prices to calculate the proportion of GDP and daily average FX trading volumes for the country-year pairs for which the BIS data was available (Table 3.1.). Up to 2007 and compared to EU-15, this trading made up a larger or comparable GDP share than the EU-15 average in at least one of the years for which data is available in all ECE-11 countries except Bulgaria, Romania and Slovenia. By far the highest GDP shares in the group were recorded in Latvia, followed by the remaining Baltic countries and by Czechia as of 1998. The trends in the pre-crisis period diverged – while FX trading in Czechia, Poland, Latvia and Lithuania was on a downward slope, in Estonia, Hungary and Slovakia it peaked in 2007. In most countries there was a clear decline in the volume of FX trading as well as its share in GDP after 2007 or 2010, particularly sharp in the Baltics and Slovakia following their adoption of the euro. Bulgaria is the only country that clearly bucks this trend, while in Poland and Slovakia there was a moderate rebound in FX trading in 2016. As we have seen, the latter two countries diverged also from the dominant ECE-11 trends in financial and current account balances. As of 2016, the share of FX trading in GDP was lower in most ECE-11 countries than in EU-15, the exceptions being Bulgaria, Hungary, Latvia and Slovakia.

A high **share of derivatives in FX transactions** (see Table 4) is a clearer sign of carry trade activity than the simple volume of FX trading. Data is taken again from the BIS database and likewise takes the form of daily averages in mil. USD for the month of April every three years. The time series starts in April 1998 for several countries and at various later points for other countries; for Estonia, Croatia and Slovenia, there is no data at all. For the purposes of my analysis, I differentiate between spot transactions and all other trading instruments (forwards, FX swaps, currency swaps and options), which could be labelled as “derivatives”. Unlike spot transactions, derivatives may be used for carry trade purposes. I calculated the share of derivatives in total FX transactions for all years and countries for which data was available. The share is generally quite high, typically more than 50% in most



years except in 1998, which suggests that these financial markets converged with more advanced markets in terms of using such instruments by the early 2000s. By far the most common derivative instruments in all ECE-11 countries as well as Germany was FX swaps, followed by forwards. However, no overall trend can be discerned – the share of derivatives tended to oscillate rather than increase or decrease in a secular manner, sometimes quite wildly (in Slovakia, it ranged from a minimum of 27.8% in 2016, which was due to an unusual expansion of spot trading, to a maximum of 93.7%). The share of derivatives was relatively low in Bulgaria for all years for which data is available (never above 40%). Somewhat surprisingly, given the aforementioned large volume of FX trading, the share was not particularly high in Latvia either. The share of derivatives in FX trading in Germany dropped below 70% only once, in 1998. This was broadly comparable with all ECE-11 countries except Bulgaria and perhaps Latvia.

Next I look at the **share of non-residents in derivative-based FX trading**, which is another indicator of likely carry trade. Since the BIS does not publish data on the share of non-residents in transactions involving derivatives in general, I use data on the share of non-residents in FX swaps transactions as the most common type of derivative used for FX trading in Europe. I compiled the data from the BIS triennial survey series starting in April 1998 and ending in April 2016. Table 5 shows the daily averages of FX swaps trading volume and the share of “cross-border reporting dealers”, “other cross-border financial institutions” and “cross-border non-financial customers” in the former. Since BIS publishes only daily averages for the three latter categories, I first calculated their sums for each country-year pair and then their shares in the total FX swaps trading volume averages. Time series for several countries begin in 1998 and for most countries in 2004. However, there is no data at all for Croatia, no data for Slovenia except for 2004 and 2007, and no data for Estonia in 2016, possibly because its volume of FX trading was minimal already in 2013. In general, FX swaps trading in the region is strongly dominated by non-residents. The share of non-residents rarely dropped below 70% in any given country and year and almost never below 50%. The situation was not dramatically different in Germany, where the share never fell below 80%. However, while in Germany the share exceeded 90% only once, several ECE-11 countries registered a share of non-residents above 90% in two years or more: Bulgaria, Hungary, Latvia, Lithuania, Romania and Slovakia. The share of non-residents was somewhat lower in Czechia and Poland; Slovenia registered the lowest share of non-residents in the dataset in 2004, but we lack enough data to assess its overall experience with FX swaps trading. The share of non-residents stayed fairly high throughout though somewhat lower values are apparent in 2001 and 2004 than in the later years; for example, the average share was 72.6% in 2004 but grew to 90.1% in 2007, after which it dropped

slightly but reached a new record of 93.5% in 2016. Interestingly, countries like Latvia, Lithuania and Slovakia display a very prominent role of non-residents in FX swaps trading even after their adoption of the euro, which complicates the assumed association between non-resident activity in FX trading and financialized carry trade.

Another potential indicator of carry trade is a high **share of short-term maturity instruments in derivative-based FX trading**. Similarly to the indicators I already discussed, it does not constitute an outright “proof” of carry trade but it suggests that such derivatives were not used, for example, mainly by exporters to hedge against FX risk (Gabor 2011: 179). Since data on the share of short-term (seven days and less) maturity instruments in total FX trading based on derivatives is not available, I again draw on BIS data on FX swaps trading specifically (see Table 6). There is no data for Croatia, data for Slovenia is limited to 2004 and 2007, and data for Romania and Bulgaria is available only from 2007 and 2010 onwards, respectively. Overall, we see a high share of short-term FX swaps, which has only rarely dropped below 70%. In Germany, the share was slightly lower at 68% average. Slovenia is the only ECE-11 country with a lower average share but the insufficient data does not allow for authoritative conclusions. The average share was the highest in Latvia (96%), followed by Romania (85%) and Lithuania (81%). A growth in the share of short-term FX swaps was apparent in the 2000s – while the average for the ECE-11 group in 2001 was 63%, this grew continually to the peak of 83% in 2010, after which it decreased slightly in 2013 and then stayed practically constant in 2016. The assumed association between the usage of short-term derivatives and carry trade is complicated by the fact that there was no immediate drop in the share of short-term FX swaps after the adoption of the euro in Latvia, Lithuania and Slovakia; in Estonia, there was a huge drop in this share at the time of euro adoption.

A final potential indicator of carry trade activity that I examine is the accumulation of **official international (FX) reserves**. As previously noted (Mikuš 2019), Gabor (2010, 2011), in particular, argued that in postsocialist Eastern Europe this resulted from central banks’ sterilizations of speculative capital inflows through selling national currency and buying foreign currency. The most comprehensive data on ECE-11 reserves I found is from the IMF’s International Finance Statistics, which covers all ECE-11 countries from 1993 onwards (see Table 7), whereas ECB data only start in the late 1990s or early 2000s depending on the country. I further computed the shares of international reserves in GDP using World Bank data (see Table 7.1). Several initial observations can be made. In most countries, reserves tended to grow for most of the studied period, unlike in Germany, where they remained more or less stable. A major exception from this trend are eurozone countries, all of which registered large reductions of international reserves in their respective years of euro



adoption. However, we have to interpret this carefully – much of the drop can be likely explained as an effect of the fact that euro reserves stopped being *international* reserves after euro adoption. Still, it seems clear enough that euro adoption reduced these countries' need to accumulate international reserves, as these have not returned to the pre-euro levels in any of the five eurozone countries. Estonia, Slovakia and Slovenia continued to maintain reserves at very low levels compared to the pre-euro period as well as smaller share of GDP than in Germany in the same period. Latvia and Lithuania displayed a rebound of reserves in recent years and reached a somewhat higher share of reserves in GDP than Germany. Non-eurozone states accumulated much larger international reserves than the eurozone countries. In Bulgaria, Croatia, Poland and especially Czechia, where reserves made up the largest share of GDP in the group as of 2017 (at 69%, up from 26% in 2014), the ratio of reserves and GDP has had a general upward tendency since the crisis, while in Hungary and Romania there was a moderate decline and the ratio returned approximately to its pre-crisis levels. Two points in which the pace of reserves growth was particularly fast in several countries at the same time are evident: 1995 in the four Visegrád countries and 2002 in Czechia, Romania, Slovakia and Slovenia.

### 3.1.3. *Other indicators of a financialized monetary regime*

As previously noted (Mikuš 2019), the liberalization of capital account (or rather, as per Eurostat definition, financial account) is an essential enabling condition for capital inflows that potentially lead to the financialization of national political economies and states. An existing quantitative indicator of the **degree of external financial liberalization** is the Chinn-Ito index, which is defined as a de jure measure of financial openness and is “based on the binary dummy variables that codify the tabulation of restriction on cross-border financial transactions reported in the IMF’s *Annual Report on Exchange Arrangements and Exchange Restrictions*” (Ito and Chin 2018: 1). The index runs from 1970 to 2016, but in the case of ECE-11 countries pre-1989 data are only available for three countries: Romania (from 1976), Hungary and Poland (both from 1986). Since my focus is on the postsocialist period, I use the data on these three countries from 1990 onwards and for the remaining countries either from 1994 (Bulgaria) or 1996 (all other states). For comparison, I again include data on Germany. The maximum possible score of the index, indicating most financially open economies, is 2.36, while the minimum possible score is -1.91.

As Table 8 reveals, Germany has had the maximum score already by 1990 (in fact, since 1970) and retained it during the entire covered period. Conversely, the three ECE-11 countries for which data is available from 1990 onward (Hungary, Poland and Romania) started their postsocialist transformation with the minimum score. Overall, we see a clear

trend toward liberalization: as of 2016, six out of the eleven countries had the maximum possible score while the lowest score in the group was 1.07. In a number of countries, much of the liberalization occurred in the run-up to their EU accession. However, there was a substantial variation in the pace, timing and degree of liberalization. The process was particularly abrupt in Romania and Bulgaria. The two economies were quite closed until the early 2010s, then implemented fast liberalization and reached the maximum score by 2006 (Bulgaria) and 2007 (Romania), which coincided with their entry into the EU in 2007, and maintained the same degree of openness ever since. The extent of transformation was much less dramatic in Croatia, which was relatively closed (albeit more moderately than Romania and Bulgaria) until 2002, then suddenly opened in 2003 and retained the same score ever since. This has made it one of the three most closed economies in the group as of 2016, along with Poland and Slovenia. In the Visegrád Group, the trajectories of Czechia and Hungary are quite similar to each other. The two economies were relatively closed up to 2001 (at the more moderate level of Croatia rather than the one of Romania and Bulgaria) when they opened suddenly, reaching the maximum score roughly at the time of their EU accession (Czechia in 2004, Hungary a year later) and maintaining it since then. Poland and Slovakia liberalized less radically. They were fairly closed (at the level of Romania and Bulgaria rather than the one of Croatia, Czechia and Hungary) up to a sudden liberalization in 2002 (Slovakia) and 2003 (Poland), shortly before their EU accession. Poland has kept the same moderate level of openness until another round of liberalization in 2015. Slovakia continued with a more gradual opening up to 2009, after which it retained the same moderate score, though somewhat higher than Croatia, Poland and Slovenia. As could be expected due to their neoliberal orientation, the Baltic states were the earliest and most radical liberalizers. Estonia and Latvia had the second highest score in ECE-11 already in 1996. Estonia reached the maximum degree of openness by 1998 and Latvia by 2003, after which they maintained it without any reversal. The case of Lithuania is somewhat specific: it started as the most open economy in the sample as of 1996, reached the maximum score already in 1997 and kept it up to 2007. However, it gradually restricted financial flows in 2008–14 (presumably in an effort to manage the impact of the reversal of financial flows) and only resumed liberalization, this time more carefully, since 2016. Finally, Slovenia's trajectory is similar in that it has also experienced a reversal of liberalization in the aftermath of the financial crisis. A sudden opening occurred in 2000, followed by a gradual liberalization up to 2007 when the maximum score was reached. However, starting already in 2008, capital account openness had been progressively restricted up to 2012 and the same level of openness has been maintained since then.

As previously argued (Mikuš 2019), low and stable **inflation** suggests (though, again, it does not prove) the adoption of the orthodox neoliberal monetary policy and represents another crucial precondition for the capital inflows that provide the basis of peripheral financialization. I use a WB inflation data set that is more comprehensive than its Eurostat and IMF counterparts; it includes data for most ECE-11 countries from 1992 onwards and for all of them from 1994. Table 9 reveals a dramatic change in the pace of consumer price inflation in the region. While many countries experienced high to extremely high inflation in the 1990s (with episodes of hyperinflation in Bulgaria, Croatia, Latvia, Lithuania, Poland and Romania), inflation rate since 2000 was single or double-digit and the highest rate of inflation registered in the region after 2003 was 15.4% (in Latvia in 2008). In most countries, inflation tended to slow down in the early-to-mid 2000s, though it continued to regularly exceed the conventional 3% upper limit of inflation-targeting policies. It picked up somewhat throughout the region at the peak of the credit boom in 2007–8, followed by another period of slowdown and convergence to very low or even negative levels in the most recent years. While this most recent period of low inflation/deflation can be attributed largely to the general economic conditions in Europe, policy changes likely played an important role in the earlier remarkable reductions of inflation rate. A striking example is Croatia that cut its inflation rate from as much as 1500% in 1993 to 3.95% in 1995 and subsequently kept it (except in two years) below 5%. However, it bears noting that Germany as well as EU-15 has kept its pace of inflation at even lower levels than the ECE-11 countries, except during most recent years when inflation in ECE-11, for the first time in the period covered, was slower and even turned negative.

The model of Eastern European peripheral financialization described in the literature assumes also **exchange rate dynamics** characterized by a generally overvalued (either stable/rigid or continuously appreciating) local currency. This is understood as a more or less deliberate policy engineered to attract and retain capital inflows as well as to prevent banking, economic and social crises that could follow from a sudden depreciation of the local currency in a setting of FX indebtedness. Table 10 displays real exchange rate index (with the value in 2010 equalling 100%) in 1995–2017 in ECE-11, EU-15 and Germany. The exchange rate dynamics was generally consistent with the model of peripheral financialization in the pre-crisis period, when there was a general appreciation in ECE-11 countries with only occasional marked year-on-year depreciations in Bulgaria, Romania and Poland. In EU-15 and Germany, real exchange rates declined in the mid-to-late 1990s and then rallied in the early-to-mid 2000s. Therefore, in ECE-11 as well as EU-15 and Germany real exchange rates peaked at various points in 2007–2009, after which they dropped significantly and then stayed below or only moderately above the 2010 level. The only

exception is Estonia where real exchange rates have surpassed the pre-crisis peak every year since 2014. This might suggest a slowing down or even reversal of financialization in Eastern Europe or, more cautiously interpreted, a possibility that the model of peripheral financialization as theorized in the literature accounted for its characteristic pre-crisis tendencies but not those after the crisis.

Finally, as noted in Mikuš (2019), some authors discussed an increasing usage of government bonds as collateral in the European repo market as an aspect of state financialization, to the extent that financial market valuations of this collateral come to impact the positions of particular states in those markets and thereby potentially their policies. Table 11 is a compilation of data on **central government– issued collateral for outstanding liabilities in the European repo market** in 2002–17 from the December runs of the International Capital Market Association (ICMA) semi-annual European Repo Market Survey. The data for ECE-11 countries is available as an aggregate for “EU Accession Countries” in 2002–3 and for the individual countries from 2004 onwards. However, the time series for Bulgaria begins only in 2006, for Romania in 2007, and there is no data at all on collateral issued by the Croatian government. In addition, the time series for Bulgaria, Estonia, Latvia, Lithuania, Slovakia and Slovenia – states whose collateral seems to have been always used in the repo market only in minuscule amounts or not at all – end in 2014. For purposes of comparison, I calculated the overall share of ECE-11 and EU-15 countries, and to provide a sense of the overall scale of the market, I included data on its outstanding nominal value as of December each year. The market grew fast in 2002–6, shrank in 2007–8, then recovered somewhat but only topped the previous 2006 peak after a sudden expansion in 2016–17. The share of collateral issued by EU-15 states was actually highest in the beginning of this period, at more than 78% of the market. It then declined, first mostly slowly and then in one sudden year-on-year drop in 2008–9, to the minimum level of some 56% in 2010–11. It has been increasing since then and reached 66% by December 2017. As for the share of ECE-11 countries, it was negligible throughout the whole period, at some 0.4% on average. It exceeded 1% only once, in December 2006 and owing almost entirely to a sudden increase in the use of Hungarian government collateral. Market actors only reported using collateral issued by Czechia, Hungary, Poland, Romania, Slovenia and Slovakia, and only in the cases of Hungary and Poland this was during the whole period covered. The market share of Hungarian collateral declined after the crisis while the one of Polish collateral stayed about the same. Overall, then, the data does not confirm a significant and/or increasing imbrication of ECE-11 states with the European repo market.

### 3.2. Fiscal policy and public debt

As discussed in Mikuš (2019), the volume, characteristics and management of public debt are understood as key components of the financialization of fiscal policy and thereby the state. An obvious basic indicator of the importance of this mechanism for a given nation-state and national economy is the **share of public debt in GDP**. Table 12 displays the GDP shares of gross consolidated general government debt in ECE-11 countries, the averages for ECE-11 and EU-15, and the ratios of the ECE-11 and EU-15 averages in 1995-2017. The underlying Eurostat data is available from 1995 onwards, the exceptions being Bulgaria (from 1997), Croatia and Denmark (both from 2000). The missing data on Croatia and Denmark was obtained from various, mainly national, sources. The average share in ECE-11 was at its lowest (less than 25%) level in 1995–96, although it is almost certain that if data for the then highly indebted Bulgaria were available, the average would be substantially higher – for 1997, the first year for which data on Bulgarian debt is available, the group average jumps up to 30%. It then grew, though not steadily, to almost 33% in 2001. During the period of credit boom, it declined to just under 26% in 2007–8. It then increased sharply to reach the peak of more than 49% in 2014, after which a reduction of debt levels occurred. In EU-15 there was an almost continuous reduction of the GDP share of public debt from more than 70% to more than 53% in 1995–2007. Similarly to ECE-11, a marked increase occurred after 2008, peaking at 89% in 2014 and followed by debt reduction in most recent years. This largely overlapping dynamics saw the ratio of ECE-11 and EU-15 debt shares in GDP increase from more than 33% in 1995 to 56% in 2001, then drop to more than 44% in 2008, and then grow again to 57% in 2016, which was the maximum level in the covered period. On average, then, there has been a significant convergence between the levels of indebtedness in ECE-11 and EU-15 states, though these were still considerably lower in the postsocialist region at the end of the studied period.

At the same time, there has been a marked variation between the ECE-11 countries, with the level of debt in 2017 ranging from about 9% of GDP in Estonia to about 78% in Croatia, followed by Slovenia (74%) and Hungary (73%). GDP shares of public debt declined or grew moderately in most countries before the crisis, then grew sharply since about 2008 and again started to decrease in 2014. Clearly, then, expansion of public indebtedness was associated with conditions of crisis and stagnation/recession and its reduction with economic boom and fiscal consolidation (austerity) policies in the EU. One major exception to the described pattern was Estonia, where the debt share stayed fairly stable and low during the entire covered period. In Poland, there was a pattern of relatively continuous and moderate growth interspersed with shorter episodes of equally moderate decline. Finally, Bulgaria

drastically cut its GDP share of debt from almost 93% in 1997 to 13% in 2008, but this has since doubled. In terms of subregional classification, average GDP share of debt for the entire period was higher than the regional average in the Visegrád countries minus Czechia and “nonregimes” minus Romania, and lower in the Baltics, Romania and Czechia.

Eurostat data allow for a certain degree of disaggregation of this indicator of state financialization by including information on the GDP shares of debts of the four subsectors of government defined as “central government”, “state government”, “local government” and “social security funds”. State government is defined as the level of government (excluding administration of social security funds) below central government and above local government in the following federal states: Austria, Belgium, Germany, Spain and Switzerland. Considering the small number of these states and the fact that none of them is an ECE-11 country, I omit this category in Table 13, which compiles data on **gross government debt by the subsector of government**. It bears noting that data on GDP shares of the debts of central governments, local governments and social security funds is available for the complete set of ECE-11 countries and a nearly complete set of EU-15 countries (there is no data at all on the debts of social security funds in the UK and Ireland) only for 2014–17. For some countries, however, data on these subsectors is available from earlier starting points – e.g. from 1995 for Hungary, Lithuania and Romania, and from 2000 for Poland and Slovenia. It is further important to note that the data for general government is consolidated between the four subsectors, which results in occurrences such as the GDP share of central government debt being larger than the GDP share of general government debt in a given country and year, presumably as a result of central government debts to other government subsectors that are not included in the consolidated general government debt.

Overall, we can see that the debt of central governments represented by far the largest share of GDP of the three subsectors in both ECE-11 and EU-15 countries. In ECE-11, its share has been on average declining in the second half of the 2000s, stagnating in the 2000s before a sudden expansion in 2008–10 and further growth in the 2010s, with the peak of 48.5% reached in 2014. Its GDP share exceeded significantly the share of consolidated general government debt in Romania in the second half of the 1990s and in Slovenia in 2014–17, suggesting large debts of these countries’ central governments toward other government subsectors. In EU-15, the average tendency up to the crisis was a decline of the GDP share of central government debt followed by its dramatic expansion from the low of 65.5% in 2007 to the peak of 107.5% in 2013, after which it dropped by about 25 percentage points and continued in a more moderate decline. Before 2007, the GDP share of local government debt was very small in the ECE-11 countries for which this data is



available and significantly below its average share in EU-15, where it oscillated in the region of 4–6%. After 2007, this share became comparable to (though still lower than) the EU-15 average in Hungary and Poland; however, the GDP share of the debt of Hungarian local governments has since then dropped from 4.3% in 2011 to 0.1% in 2014. As of 2017, the GDP shares of local government debt were the highest in Latvia (5.5%), Poland (3.8%) and Estonia (3.2%), compared to the EU-15 average of 5.4%. Finally, the GDP share of debts of social security funds was generally low both in ECE-11 and EU-15. Major exceptions to this are Romania in the second half of the 1990s and Lithuania since 2009. However, considering that the GDP shares of general government consolidated debt in these countries and years were significantly lower than the shares of social security funds debt, it seems likely that much of that debt was actually owed to other government subsectors. Unfortunately, Eurostat does not provide breakdowns of government subsector debts by the counterparty, so additional data (probably national) would be required to check for the counterparties of these debts.

In a previous working paper (Mikuš 2019), I noted a range of indicators discussed in the literature as ways of developing the analysis of public debt as a key dimension of state financialization beyond its basic measures such as the GDP share of debt. One of the threads in these efforts is to capture the dynamics of public debt and its impact on other policies and thereby the historical and spatial processes, rather than static synchronic models, of state financialization. It was suggested that the **maturity composition of sovereign debt** might be relevant, on account of the reasoning that higher shares of short-term debt make public debt portfolios more sensitive to changes in sovereign debt markets and hence potentially speed up and intensify their impact on government expenditures and fiscal and other policies. Two general kinds of measures of maturity composition of sovereign debt are available: by initial maturity and residual maturity. Here I pay attention to the latter as a logically better reflection of actual maturity of a debt portfolio in the given point in time. Table 14 presents annual data from the ECB's Government Finance Statistics on the structure of gross general government debt by residual maturity as a share of GDP in 1995–2017. The dataset differentiates three maturity categories of outstanding debt: up to one year, 1–5 years, and more than five years. However, it does not contain any data for Ireland, Luxembourg, the Netherlands and the United Kingdom, which are therefore excluded from analysis and “EU-11” (EU-15 without these four states) is used as a proxy of the Western European core. The dataset also lacks data for Croatia before 2008, Latvia before 2010, Poland before 1999, Romania before 1998, Slovakia before 2005, Greece before 2006, and Denmark after 2015.

On the basis of the ECB data, average GDP shares of the three maturity categories for each country as well as for ECE-11 and EU-11 were calculated. These were then used to calculate ratios of the average GDP shares of the “1-” and “5+” categories of debt as a more direct indicator of the share of short-term debt in the debt portfolio of the given state or group of states. Interestingly, ECE-11 had in fact a *lower* average 1-/5+ ratio than EU-11: 36.5% compared to 45.7%. This share had divergent dynamics in the two group of states in the late 1990s and early 2000s but converged in the 2010s. ECE-11 started with a low 1-/5+ ratio (29%), which increased to 57% in 2002. However, during the credit boom, it dropped to 32% as of 2007, during and after the crisis increased more moderately to 38% in 2012, and in the five past years of recovery dropped to an even lower value than initially (28%) in 2017. In EU-11, the ratio started at a high level of 69% and then declined to 59% in 2002 and 44% in 2007 – still significantly above the ratio in ECE-11. Unlike in ECE-11, however, it continued to decline after 2007 and dropped to 35% in 2012 and 29% in 2017. Overall, then, we see major secular decline in the share of short-term debt in EU-11 and what appears to be a cyclical pattern in ECE-11. In terms of individual countries, the share of short-term debt was on average highest in Hungary, Czechia and Romania, followed by Croatia and Poland – that is, non-euro countries from the Visegrád and “nonregime” subcategories. A major exception to this pattern was Bulgaria where the 1-/5+ ratio was the lowest in ECE-11. It was further lower than average in the euro countries: the Baltics, Slovakia and Slovenia. Overall, then, we see a reduction in the relative importance of short-term public debt in the region but also a high degree of variation, which mostly seems to follow the line of division between euro and non-euro countries.

**Debt service costs** reflect the key conditions of particular state’s debt repayment (maturity as well as interest) and their dynamics in real time. The most comprehensive data on EU member states’ debt service costs is provided by the ECB – it includes both principal due and interest due and their breakdown by several maturity categories. Unfortunately, the time series for most states only begin in December 2009. Table 15 presents a compilation of monthly ECB data on debt service costs due in up to two years as a share of GDP. Table 15 presents a compilation of monthly ECB data on debt service costs due in up to two years as a share of GDP. In the interests of a manageable table size, only December data are presented for each year, but the country and regional averages are based on all the monthly data available. Several methodological caveats are important. First, the data is *not* consolidated within general government. Second, it is defined as principal and interest due on debt securities, so it does not include costs of the servicing of debts based on other kinds of instruments. There is no data for Estonia due to the fact that most Estonian debt securities are issued without an ISIN and are therefore not included in the ECB’s Centralized



Securities Database (CSDB), on which this data-set is based. Time series for all other ECE-11 and EU-15 states begin in December 2009 and at the time of writing end in September 2018, except for Croatia (from December 2012) and Lithuania (February 2010).

On average, debt service costs of ECE-11 states due in up to two years as a share of GDP tended to grow in 2009–18, though there was a great deal of oscillations that complicate the picture. The average debt service costs in ECE-11 stood at about 10.5% of GDP in December 2009. They grew to nearly 12.9% as of March 2011, then declined somewhat, but resumed growth in 2012–13 and reached the maximum value in the period covered in April 2013 – 16.6%. Since December 2016, they stayed in the region of 12–14%. The average of the group for the period covered was about 13.5%. Among the individual ECE-11 countries, debt service due in next two years took by far the largest average share of GDP in Hungary (28.6%), followed by Croatia (20%), Slovenia (15.6%) and Poland (14.3%). Slovakia's average (13.3%) was just below the group average, followed by Czechia (12.3%), Lithuania (11%), Romania (10.8%), Latvia (5.5%) and Bulgaria (4%). The relative size of debt service costs in individual countries was thus clearly correlated with, but not determined by, the size of their public debts as a share of GDP. Some of the variations are striking: for example, the GDP shares of general government debt in Hungary and Slovenia were about the same in 2017, but Slovenia's debt repayment costs were a half of those of Hungary. In EU-15, the central tendency was the opposite: towards a gradual reduction of the GDP share of debt service costs. The group average was 19.9% in December 2009, it peaked at 23.1% in May 2010, but since December 2016 it stayed in the range of 16–18%. As a result, we see a convergence of the average GDP shares of debt repayment costs in ECE-11 and EU-15.

Eurostat database further offers annual data on **interest payable on government debt** (consolidated within general government) as a share of GDP (see Table 16). While this data does not cover principal due, its advantage is that time series for all ECE-11 and EU-15 countries start in 1995, except for Croatia (2001) and Poland (2000). The average GDP share of interest paid by ECE-11 states was largest in the beginning of the studied period, with the peak of 3.9% in 1996; it then continuously declined until it reached a minimum level of 1.3% in 2008. It subsequently increased to 2.0% in 2012–14 but has since declined to 1.4% in 2017. This suggests that the aforementioned growth of average debt service costs of ECE-11 states in 2009–18 was not due to increasing interest rates but probably mostly growing principals. The average GDP share of interest paid by EU-15 states was consistently larger during the entire period covered, though the gap has gradually narrowed. It was 5.4% in 1995, from which value it declined continuously to 2.4% in 2006–7. In the aftermath of the crisis, it increased to the level of 2.9% in 2011–12 but has since decreased

to 1.9% in 2017. The trend in most ECE-11 countries followed the average tendency of a reduction in interest payable in the late 1990s and/or early-to-mid 2000s, followed by its relatively modest expansion in the aftermath of the crisis and another period of reduction in most recent years. Bulgaria and Hungary started with very high levels of interest payable in the mid-1990s and reduced these to a great extent already by 2002. In Hungary, the level of interest paid subsequently remained in the region of 3.9–4.5% in 2002–14, which was the highest in ECE-11; however, it has been also falling since 2015. Croatia, Poland (except in past five years), and Bulgaria and Romania in the 1990s also consistently posted above-average GDP shares of interest paid. Conversely, in Estonia this share remained very low during the whole period and in Latvia, Lithuania, Czechia, Bulgaria and Romania (for the latter two only since ca. 2002) it tended to be below or less often near the average. The values for Slovakia and Slovenia tended to be near the average, except in Slovenia since 2010 when they shot up well above the average.

As noted in Mikuš (2019), Fastenrath et al. (2017) identified three quantitative indicators of the financialization of sovereign debt management: the share of marketable debt in total government debt; the share of marketable debt held by non-residents; and the share of marketable debt in foreign currency. All three indicators operate with the concept of “marketable debt”, which the authors define in the following manner: “marketable debt instruments include short-term (Treasury bills), medium-term (notes) and long-term securities (bonds) [while] typical non-marketable debt instruments are foreign-currency loans, loans from financial institutions and savings bonds for personal investors” (Fastenrath et al. 2017: 288, n. 5). Their data on OECD countries derives from the OECD Central Government Statistics database, the compilations by Missale (1999) and Abbas et al. (2014), and other primary sources such as reports of debt management offices or treasury bulletins. However, the OECD Central Government Statistics Database only contains data on OECD member states, which means that it contains data on only six ECE-11 countries: Czechia, Estonia, Hungary, Poland, Slovakia and Slovenia. In addition, the database is not being updated since 2010. The compilation by Abbas et al. (2014) covers an even smaller subset of OECD countries, which does not include any of the ECE-11 countries, while the compilation by Missale (1999) is quite dated and hence by definition unfit for our purposes. As for national data sources, these are likely to use different classifications of debt instruments, which limits the comparability of the data. The ECB Central Government Finance database provides the most comprehensive coverage of government debt in ECE-11 countries. However, it does not classify debt as marketable and non-marketable and its classification of financial instruments and assets (“currency and deposits; debt securities; loans; trade credits and advances”) cannot be used to construct marketable/non-marketable

debt aggregates according to the definition formulated by Fastenrath et al. (2017). Given this limited data availability, I do not discuss shares of marketable debt in total government debt and instead of shares of marketable debt held by non-residents and denominated in foreign currency, I discuss corresponding shares of consolidated general government debt as the best available approximation.

To compute **shares of general government debt held by non-residents** (Table 17), I took ECB data on shares of general government debt held by residents (defined as “domestic counterparty area”) and subtracted these from 100%. I also calculated yearly average shares for the ECE-11 group and average shares for each country for all years for which data is available. Time series for all ECE-11 countries run from 1995 to 2017 except for Latvia (from 2008) and Poland (from 1999). For EU-15 countries, time series run from 1995 to 2017, but no data is available on four countries: Greece, Ireland, Luxembourg and the United Kingdom. Therefore, for comparative purposes, I calculated average shares for those old EU member states (“EU-11”) for which data is available.

On average, the shares of government debt held by non-residents tended to grow in both groups but the trends are not entirely straightforward (more complex than the general boom-and-bust cycle) and their dynamics in the two groups are somewhat different. In 1995, both groups recorded lowest average shares in the studied period with a marked difference between ECE-11 (45%) and EU-11 (33%). The average ECE-11 share oscillated but the dominant trend during most of the period was upwards: the share grew in 1995–2000, dropped in 2001–2, returned to growth in 2003–6, fell slightly in 2007–8, picked up strongly in the aftermath of the crisis to reach the maximum value in the period covered in 2014 (58%), and again dropped more moderately in last three years. The trend in EU-11 was initially more straightforward: the average share grew continuously from 1995 to 2008 when it peaked at 57%. However, it has since then moved in a more oscillating pattern: it dropped in 2009–11, increased in 2012–14 (reaching second highest value during the period covered in 2014) and again decreased in last three years – the same as in ECE-11. These trends meant that the average share was higher in ECE-11 than EU-11 in 1995–2001, lower in 2002–11, and again higher since 2012. The average share for the entire period is only slightly higher in ECE-11. Within the ECE-11 group and from the perspective of averages for the entire period covered, the three Baltic countries and two of the “nonregimes” (Bulgaria and Romania) all have significantly higher average shares of debt held by non-residents than the group average. The average for Croatia is closest to the group average while the Visegrád countries and Slovenia populate the bottom half of the ranking, with Czechia having by far the lowest average. At the same time, Czechia has experienced a marked

growth of the share of debt held by non-residents in recent years, thus deviating from other countries of the group where it was falling.

Next I look at the **share of FX debt in general government debt** (Table 18) on the basis of data from the ECB database. Time series for ECE-11 countries begin in 1995 except for Croatia (2008), Latvia (2010) and Poland (2000). For all EU-15 countries, time series begin in 1995, except for Luxembourg for which no data is available, so that an “EU-14” average (EU-15 without Luxembourg) was computed for comparative purposes. Crucially, the average share of FX debt was significantly and consistently higher in the ECE-11 group, where it averaged 32% throughout the whole period, than in EU-14 (6%). The average share in ECE-11 stood at more than 40% in the mid-1990s, from whence it dropped during the credit boom to about 23% in 2007. In the bust period, it generally grew and reached a new peak of 33% in 2014, after which it decreased. In EU-14, the average share of FX debt started at 10% in 1995 and decreased to a minimum 3% in 2007, since when it shot over 5% twice but also decreased in most recent years. The variation within the ECE-11 group is very clearly correlated with the adoption and non-adoption of the euro. The highest average for the whole period is Bulgaria’s (84%), followed by Croatia (78%) and Romania (65%) - i.e. the three “non-regimes” in Bohle’s and Greskovits’ (2012) typology. Two Visegrád countries, likewise not using the euro, are near the group average – Hungary (34%) and Poland (32%). By far the lowest average share of FX debt is declared by Estonia (7%) which seems to have all but eliminated FX government debt after 2000, followed by Slovakia and Slovenia (both around 10%). The three countries have all adopted the euro, as well as more recently Lithuania (with 16% average share of FX debt) and Latvia (17%). The only non-euro state significantly below the group average is Czechia (15%). In terms of Bohle’s and Greskovits’ typology, this places all three Baltic states, two Visegrád countries (Czechia and Slovakia) and the neocorporatist Slovenia significantly below the group average.

#### 4. Public-service provision: pension systems

As noted in Mikuš (2019), internationally comparable secondary quantitative data that could be used as indicators of the financialization of public sectors in East-Central Europe is largely non-existent. Still, several types of data with clear relevance to this focus can be identified. The first is the **GDP share of assets of funded pension arrangements**, which are associated with the financialization of pension systems. Table 19 presents OECD Global Pension Statistics data on investments in such arrangements which is used as an imperfect

proxy for their assets.<sup>4</sup> Time series for most ECE-11 and EU-15 countries begin in 2001; for country-year pairs for which data on all types of pension funds<sup>5</sup> was not available, this was substituted, following OECD's own methodology in its *Pension Markets in Focus* reports, with data on autonomous pensions funds. Even then, relevant time series begin for Croatia in 2002, Slovenia in 2003, Luxembourg in 2003, Greece and Romania in 2007, and Lithuania in 2010. The data shows that the average GDP shares of funded pension arrangements have been steadily growing in 2001-17 in both groups of states as well as in most ECE-11 states except Hungary and Poland, where sudden year-on-year drops in the share were presumably related to changes in national legislation regulating pension systems. The expansion in ECE-11 started from a dramatically lower base (1% average share in 2001 as opposed to 32% in EU-15) but grew more rapidly as it reached 11.5% in 2017 (compared to 50% in EU-15). Variation in both groups of states is very high (for example in EU-15 currently from as little as 1% in Greece to 208% in Denmark), which suggests that this indicator is probably highly sensitive to differences in national legal classifications of pension arrangements. In ECE-11, Croatia has the highest GDP share of investments in pension funds – average of 12% for the entire period (compared to the group average of 6%) and as high as 27% in 2017. It is followed by Poland (11% average) and Estonia (8%). Average for Hungary is slightly above the average while the one for Slovakia slightly beneath it. Romania recorded the lowest average GDP share (2%), followed by Slovenia and Lithuania (both around 5%). There was thus no visible correlation with Bohle's and Greskovits' typology of CEE states, euro adoption/non-adoption or other considerations that emerged as significant in relation to other indicators.

## 5. Lawmaking and regulation: offshore centres

To measure the exposure of ECE-11 states to offshore centres theorized as jurisdictional instruments of financialization, I look at Eurostat data on **FDI positions with offshore centres** measured as end-of-the-year net closing positions. This data is available for all

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<sup>4</sup> "This proxy may provide a low estimate of the amount of assets. Accounts payable or receivable and intangible assets may be considered as an asset of the provider but not as an investment. Private pension assets may also include claims on defined benefit (DB) plan sponsors. In the case of DB plans that are underfunded, pension funds may require employers to contribute more so that retirees receive the amount they were promised. In that case, this amount to be paid by employers is considered to be an asset of the plan, but is not an investment. While the difference between investment and assets may generally be minor, there are some cases, such as the United States, where the difference can be more substantial..." (OECD 2016: 6, Box 1).

<sup>5</sup> With subcategories being: pension funds (autonomous); book reserve (non-autonomous); pension insurance contracts; investment companies managed funds; banks managed funds; other.

ECE-11 countries except Lithuania and Poland from 2008 onwards, as a result of which the period under consideration is 2008–17. ECE-11 countries tended to have negative FDI positions with offshore centres, suggesting a presence of net capital outflows. The only exceptions are Slovenia in 2008–14 and Slovakia since 2015, with the latter becoming in 2017 the first country in the group with a positive FDI position with offshore centres larger than €1bn. Hungary has had by far the largest negative FDI positions in the range of €25–45bn in 2008–12 and €5–18bn since then. By comparison, negative FDI positions of the remaining countries have been rarely larger than €2bn. In recent years, Bulgaria, Estonia, Lithuania and Romania recorded somewhat larger negative positions than Croatia, Czechia, Latvia and Poland, especially when considered in relation to the size of their economies. In 2008–10, Poland also had significantly larger negative position than in all other years, at more than €3bn.

## 6. Investment policy: state ownership of financial assets

To gain an exploratory, preliminary sense of the possible extent and modalities of the financialization of investment policy in ECE-11, I look at consolidated data on **government holdings of various financial assets** in 1998–2017, which is part of Eurostat annual financial accounts for general government (Tables 21.1–7). Unfortunately, some potentially insightful aggregate indicators such as net financial transactions and financial net worth are merely included in the database but no data is available for either ECE-11 or EU-15 countries. Government holdings of the following types of financial assets were negligible in both EU-15 and ECE-11 in the entire period covered by the data set and were therefore excluded from the analysis: monetary gold and special drawing rights (data is actually missing for many ECE-11 countries); investment fund shares (though these took a somewhat larger share of GDP in EU-15, with a regional average reaching 2% in recent years, while in ECE-11 they reached the range of 0.5–1.5% in their best years only in Croatia and Slovenia); and insurance, pensions and standardized guarantees.

The average GDP share of **total government financial assets** (Table 21.1.) in ECE-11 was the highest in the beginning of the period when it stood at 72% in 1998, buoyed especially by the then huge relative holdings of Bulgaria (164% of GDP) and Romania (136%). In 1999, the average was down to 63%, which was however still significantly more than in EU-15, where it stood at 33%. The EU-15 average decreased only modestly to 28% by the early 2000s, since which time it increased to more than 40% in recent years. By comparison, the ECE-11 average dropped much more significantly and over a longer period of time, reaching about 35% in the early 2010s; since then, it has increased again in most



recent years to some 38–39%. In addition to Bulgaria and Romania, the GDP shares of government financial assets tended to be above the group average in Croatia, Slovenia and Estonia. On the contrary, the lowest GDP shares were recorded by Latvia and Hungary, followed by Slovakia and Poland. The three “nonregimes” and Slovenia are thus on the top of the ranking while Visegrád countries populate its bottom half and the Baltic states are dispersed.

For most countries and years, **government holdings of equity** (Table 21.2.) took up the largest share of total government financial assets. The regional average GDP share in 1999 was again significantly larger in ECE-11 (33% as compared to 14%), but by the late 1990s it decreased to about 18%, at which level it has stayed since. The decline was particularly fast in the early 1990s and early 2000s, likely in connection with the processes of privatization then accelerating in the region. In comparison, the EU-15 average has stayed much more constant and generally lower throughout the period covered, i.e. in the region of 10–15%. As for individual countries, broadly in line with their ranking by total government asset holdings, the GDP share average for the entire period was particularly high in Croatia, Slovenia, Estonia and Romania, followed by Lithuania and Bulgaria. On the contrary, the average was by far the lowest in Slovakia, followed with some distance by Hungary, Czechia and Poland. There is thus an even clearer grouping of Visegrád states in the bottom of the ranking than in the case of total financial assets, while the “nonregimes” split: Croatia and Romania remained on the top, together with Estonia and Slovenia, while Bulgaria slipped toward the group average, suggesting a lesser relative importance of equity in its overall holdings of financial assets (they took about a third while in other ECE-11 countries they tended to be about a half of total assets).

**Government holdings of other accounts receivable** (Table 21.3.) were the second largest category of government holdings of financial assets as a share of GDP for most countries and years. Other accounts receivable/payable are defined in the ESA 2010 methodology used by Eurostat as “financial assets and liabilities created as counterparts to transactions where there is a timing difference between these transactions and the corresponding payments. [They] include transactions in financial claims which stem from the early or late payment for transactions in goods or services, distributive transactions or financial transactions on the secondary market” (Eurostat 2013: 152). In practice, this translates to government holdings of claims on the basis of trade credits and advances, payment arrears, and accrued taxes, social contributions, dividends, rent, interest etc. It is therefore likely to be related to the liquidity of the financial system and prevalence and tolerance of arrears in each national context. The category includes two subcategories: trade credits and advances, and other accounts receivable/payable, excluding trade credits and

advances; however, data for these subcategories is not available for any of the ECE-11 countries except Estonia. These government holdings were consistently more prominent in ECE-11, where the regional average stood at 12% in 1999 compared to 6% in EU-15. It has subsequently declined to about 7% as of 2006 and stayed in the region of 6.5%–8% ever since. The EU-15 average was more constant and stayed in the range of 6.2–7% during the entire period covered. As for individual countries, these assets represented a particularly large share of GDP in Romania (20% average for the entire period), Croatia (12%) and Czechia (9%). The lowest GDP shares were recorded by Lithuania (4%), Latvia (5%), and Estonia and Hungary (around 6% each). Poland was slightly above the group average and Bulgaria, Slovakia and Slovenia below it.

The third largest category of government holdings of financial assets as a share of GDP was **government holdings of currency and deposits** (Table 21.4.). These were again, on average, more prominent in ECE-11 than in EU-15 but the difference was less marked than in the case of other accounts receivable. The ECE-11 average was in the range of 5.5–7% up until 2006 and since then in the range of 7–9%. The highest ever point for the EU-15 average, by comparison, was 6.7%. The average GDP share for the entire period was the highest in Bulgaria (nearly 14%), Slovenia (11%) and Czechia (10%). In contrast, it was the lowest in Poland, Romania and Hungary (in all three around 5%).

The fourth largest category of government holdings as a share of GDP was **government holdings of loans** (Table 21.5.). These are particularly interesting as they document the extent to which a state plays the role of the creditor. Almost all these holdings in ECE-11 countries were long-term loans; short-term loans represented a significant GDP share only in Slovenia in 2013–17. For most years and on average, this indicator was more prominent in EU-15 than in ECE-11. While the ECE-11 regional average was above 10% of GDP in the late 1990s, it had subsequently quickly declined. From 2004 onwards it stayed below the 4% mark and was consistently lower than in EU-15, where it continuously grew up to the peak value of 7.6% in 2013. The highest average in the ECE-11 group for the entire period was Bulgaria's (9%), driven by very high GDP shares of its loan holdings in the late 1990s and early 2000s. It is closely followed by Slovakia (8.6%) where these holdings grew in recent years significantly. Since 2013, government holdings of loans have been prominent also in Slovenia. In contrast, the GDP share of these holdings has been low in Poland during the entire period covered as well as in Romania and Lithuania except in the period around 2000, in Latvia except around 2010, and in Estonia except since the early 2000s.

**Government holdings of debt securities** (Table 21.6.) represented a negligible or non-existent share of GDP in most ECE-11 countries in most years. The regional average for EU-15 is also small but still somewhat higher than the one for ECE-11. The difference



has been particularly apparent since 2010 when the EU-15 average remained above 3% while the ECE-11 average was below 1%. The only ECE-11 country with somewhat more significant holdings of debt securities for most of the covered period is Estonia where the GDP share had been in the range of 5–12% in 2002–12 but has since declined. Other than that, only Bulgaria had relatively significant holdings of debt securities in the late 1990s and early 2000s.

The situation is similar for **government holdings of financial derivatives and employee stock options** (Table 27.1.), except in this case the regional average GDP shares for both ECE-11 and EU-15 were negligible. The only ECE-11 countries with moderately more significant holdings of these assets were Croatia in 2013 (when the value of its derivatives went negative) and 2015–16, Hungary in 1999–2001, 2010–12 and 2014–16, Latvia in 2014–16, and Slovenia in 2015–16. The reasons why each of these four countries had temporarily larger holdings of financial derivatives in the same recent period (2014/15–16) merit further investigation.

## 7. Discussion and conclusions

To conclude, I will consider the above partial analyses of available secondary quantitative data in relation to each other and point out the most significant findings and their mutual linkages. Looking first at the ECE-11 region as a whole and in comparison to the (proxies for the) Western European core, the analysis corroborated a likely presence of peripheral financialization as theorized in the literature (though not directly financialization of the state), in particular on the basis of a more deficit-prone and cyclical dynamics of financial account and current account balances and higher GDP shares of FX trading volumes before the crisis, accompanied by upwards real exchange rate dynamics. More indirectly and tentatively, peripheral financialization might be also indicated by more deficit-prone and cyclical dynamics of current account balances, the prevalence of forms of FX trading associated with peripheral financialization (derivatives, short-term instruments, non-residents), the remarkable consolidation of the inflation-targeting monetary policy regime in the 2010s, and the more marked increase in the GDP share of international reserves than in the core. Where the analysed data does *not* confirm a presence of (peripheral) financialization in the region is the declining significance of FX trading, in particular in euro-adopting countries, the persistence of relatively low levels of the financial openness index in several countries, and the consistently marginal importance of ECE-11 government-issued collateral in the European repo market.

An ongoing financialization of ECE-11 states is more immediately indicated by the generally fast pace of growth of their sovereign debts, especially those of central governments, and their convergence (though still far from complete) with the levels in the core. We can also note the continued growth of average GDP shares of debt service costs due in up to two years (as compared to their reduction in the core), the narrowing of the gap between average GDP shares of interest payable in the two regions, and the significantly and consistently higher share of FX debt in total government debt in ECE-11. The share of government debt held by non-residents has been on average only moderately higher than in the core, though it is notable that its growth has resumed in recent years. Moving beyond the domain of sovereign debt, we can also observe a faster pace of the relative growth of funded and private pension arrangements than in the core, albeit from a dramatically lower base. At the same time, however, financialization of ECE-11 states is disproved rather than confirmed by the insignificant expansion of debts of non-central government branches in most countries and the smaller average share of short-term sovereign debt than in the core. Capital flows from/to offshore centres remained relatively insignificant for most countries and periods. It is difficult to interpret the data on government holdings of financial assets unambiguously; the declining GDP shares of most countries' holdings of most asset types seems to rather disprove the financialization of investment policy as typically understood in scholarship, but at the same time this decline in the boom period, in particular for equity, is consistent with the processes of privatization and neoliberalization associated with peripheral financialization in the region. The declining GDP shares of government holdings of loans and the generally negligible holdings of debt securities suggest that ECE states made limited efforts to play the role of creditors, which is consistent with the assumption that states subjected to peripheral financialization are debtor states. However, there was a limited but strikingly synchronized recent increase in several countries' holdings of derivatives.

Moving on to the variation within ECE-11, that is between individual countries as well as between euro adopters/non-adopters and the political-economic regime types identified by Bohle and Greskovits (2012), we can observe the following. The dynamics of financial account balances was most cyclical in the Baltic states and the three "nonregimes", in particular Bulgaria. Conversely, it was least cyclical in Slovenia and the Visegrád states, in particular Czechia and Poland, while Hungary and Slovakia were closer to the group average. Notably, FX trading before the crisis was likewise most prominent in the Baltics (especially Latvia) along with three of the Visegrád states. Current account deficits before the crisis were the deepest in the Baltics, Romania and Bulgaria. Deficits became more moderate but generally persisted after the crisis; only Slovenia, Hungary, Estonia and

Croatia recorded regular current account surpluses after the crisis. Romania, Poland and Slovakia were the only countries that recorded deficits of both financial account and current account in most years in 2009–17, which might suggest a more entrenched political economy of peripheral financialization than in other countries in the region. In this regard, it might be relevant that in recent years Slovakia and Poland experienced the highest pace of growth of GDP shares of household debt in the EU and that both saw a moderate rebound of FX trading, along with Bulgaria. On the contrary, Hungary and Estonia moved from pre-crisis financial account and current account deficits to surpluses, which might be perhaps tentatively interpreted as processes of de-financialization and/or de-peripheralization.

Dynamics of FX trading largely followed the distinction between euro adopters and non-adopters. It became practically negligible in most of the countries that accepted the euro, including some in which it was previously quite prominent: the Baltics and Slovenia. The only euro country that bucks the trend is Slovakia, which witnessed a recent moderate rebound of FX trade. Other than that, FX trading recently grew in significance only in non-eurozone countries: Bulgaria and Poland, while remaining significant in Czechia and Hungary. This is also consistent with variations in the dynamics of official international reserves, a growth of which has been associated with financialized FX trading in the scholarship. While the GDP shares of international reserves tended to grow in the whole region before the crisis, it has tended to decrease in countries that adopted the euro (with a partial exception of Latvia). On the contrary, it was in some of the non-eurozone countries – Bulgaria, Croatia, Czechia and Poland – in which international reserves continued to grow in recent years.

The highest GDP share of government debt as of 2017 was reached by Croatia followed by Slovakia and Hungary. Government debts were generally more significant in the Visegrád countries and the post-Yugoslav Croatia and Slovenia than in the Baltics and the remaining two nonregimes; in particular Estonia has had a consistently very low GDP share of government debt. The case of Polish government debt is interesting since its dynamics did not follow the cyclical pattern displayed by most other countries but rather one of a more continuous and gradual growth with occasional short episodes of deleveraging.<sup>6</sup> Consistently with the variation of GDP shares of government debt, GDP shares of debt service costs due in up to two years were the highest in Hungary followed by Croatia, Slovenia, Poland and Slovakia, and lowest in the Baltics (though no data was available for Estonia), Bulgaria and Romania. The dynamics of the share of government debt held by non-residents present a

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<sup>6</sup> This specific trajectory of Polish government debt might be related to the weaker boom-and-bust cycle of the Polish economy than other European economies. Indeed, Poland was the only EU member state that has not experienced recession in any of the years since the global financial crisis (Eurostat 2018b).

contrasting picture, since significantly higher averages were recorded by the Baltics, Romania and Bulgaria and the lowest by Slovenia and the Visegrád countries. The variations in the share of FX debt in general government debt seemed mostly informed by euro adoption/non-adoption, with the highest shares recorded by Bulgaria, Croatia and Romania and the lowest by Estonia, Slovakia and Slovenia.

Finally, beyond the domains of monetary and fiscal policy, the financialization of pension systems seems to be most advanced in Croatia, Poland and Estonia, and least advanced in Romania, Slovenia and Lithuania. A potential financialization of regulation through capital flows from/to offshore centres seems to have been most significant in Hungary. Slovakia and Slovenia are the only two countries with relatively more significant government holdings of loans while Estonia has had significant holdings of debt securities in the 2000s. Croatia, Hungary, Latvia and Slovenia experienced a recent moderate and short-lived increase in government holdings of derivatives.

Overall, the analysis indicates that further research on the financialization of the state might be particularly productive in the following six ECE-11 countries: Croatia, Hungary, Estonia, Latvia, Poland and Slovakia. These countries tend to display the highest values for most of the indicators of financialization that appear as significant in the region. In the same time, there are several intriguing variations within this narrower selection that could enable empirically important and theoretically productive comparisons, such as the distinction between euro adopters (Estonia, Latvia, Slovakia) and non-adopters (Croatia, Hungary, Poland) as well as the one between countries with apparently persistent financialization tendencies (Croatia, Latvia, Slovakia, Poland) and those that display signs of possible de-financialization since the crisis (Estonia, Hungary) or alternative financialization strategies (Estonia).

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## 9. Statistical Annex

Table 1. Financial account balance as a share of GDP, 1995–2017

country ↓ / year →	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	avg.
Bulgaria	0.9	-0.2	6.1	-2.5	-4.6	-4.9	-2.1	-6.4	-9.1	-4.2	-14.4	-19.4	-32.4	-29	-6.6	1.8	3.3	2.3	2.1	1	6.8	8.6	4.2	<b>-4.3</b>
Croatia	-4.9	-7.9	-10.7	-5.9	-10.7	-5.8	-4	-7.6	-8.3	-7.3	-8.2	-9.7	-9.9	-11.6	-7.5	-3	-3.1	-1	-1	0.9	4.2	2.8	3.7	<b>-5.1</b>
Czechia	-1.3	-7.5	-4.6	-1.5	-2.2	-4.9	-4.1	-4.9	-5.1	-4.9	-1.6	-2.4	-2.9	-1.1	-1.8	-3.1	-1.9	0.3	1.7	1.5	3.8	2.5	2.3	<b>-1.9</b>
Estonia	-3.8	-9.1	-11.6	-8.5	-4.9	-4.9	-5	-9.5	-4.6	-12	-8.2	-14.2	-14.5	-7.5	6.5	5.6	6.1	2.8	2.3	1.5	4.6	1.3	4.3	<b>-3.6</b>
Hungary	-0.6	-1.7	-4.7	-7.2	-8.3	-8.3	-5.3	-6.2	-7.4	-10.4	-8.9	-8.7	-6.3	-8	0.1	1.1	0.7	4.7	6.2	4.1	6.1	3.5	1.9	<b>-2.8</b>
Latvia	-11.5	-5.5	-3.8	-7.5	-8	-5.2	-7	-6.9	-7.2	-11.2	-12.4	-19.2	-19.7	-12.6	11.9	5.9	-0.5	0.9	1	2.8	2.1	2.7	1.3	<b>-4.8</b>
Lithuania	-4.6	-7.9	-7.7	-9	-11.3	-4.7	-3.4	-4.1	-5.6	-6.3	-4.8	-9.5	-12.7	-11.6	6.4	3	-0.8	1.3	3.6	1.7	2.1	0.2	2.9	<b>-3.6</b>
Poland	0.4	-1.8	-2.7	-4.2	-6.1	-5.6	-1.9	-3.3	-3.4	-3	-2.3	-3.1	-5.8	-7.8	-4.4	-6.4	-5.1	-2.3	-1.1	-1.1	0.1	0.3	-0.3	<b>-3.1</b>
Romania	-2.9	-5.5	-2.8	-6.4	-1.1	-3.7	-3.4	-4.9	-6.3	-6	-7.4	-9.5	-13.2	-12	-4.5	-4.6	-3.6	-2.5	1.1	2	1.4	0.9	-1.8	<b>-4.2</b>
Slovakia	2.3	-6.8	-6.1	-8	-3.3	-1.9	-5	-4.4	-0.3	-7.2	-7.6	-7.3	-4.3	-8.8	-3.8	-3.6	-4.7	0.4	-0.7	-0.4	-0.6	-2.1	-2.6	<b>-3.8</b>
Slovenia	-2	0.3	0.8	-0.3	-3.6	-2.8	0.7	-0.7	-0.8	-2.9	-3.7	-3.8	-3.1	-8.9	-3.5	-4	-2	-0.4	2.8	6	4.4	2.9	4.1	<b>-0.9</b>
<b>ECE-11 avg.</b>	<b>-2.5</b>	<b>-4.9</b>	<b>-4.4</b>	<b>-5.5</b>	<b>-5.8</b>	<b>-4.8</b>	<b>-3.7</b>	<b>-5.3</b>	<b>-5.3</b>	<b>-6.9</b>	<b>-7.2</b>	<b>-9.7</b>	<b>-11.3</b>	<b>-10.8</b>	<b>-0.7</b>	<b>-0.7</b>	<b>-1.1</b>	<b>0.6</b>	<b>1.6</b>	<b>1.8</b>	<b>3.2</b>	<b>2.1</b>	<b>1.8</b>	<b>-3.5</b>
<b>EU-15 avg.</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0</b>	<b>-0.6</b>	<b>-1.7</b>	<b>-0.9</b>	<b>0.3</b>	<b>0.3</b>	<b>1.7</b>	<b>1</b>	<b>0.3</b>	<b>-0.9</b>	<b>-2.6</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.4</b>	<b>0.4</b>	<b>2.3</b>	<b>1.6</b>	<b>1.8</b>	<b>1</b>	<b>2.3</b>	<b>0.2</b>
<b>Germany</b>	<b>-1.4</b>	<b>-0.8</b>	<b>-0.3</b>	<b>-0.8</b>	<b>0.2</b>	<b>-2</b>	<b>0</b>	<b>0.4</b>	<b>2.1</b>	<b>5</b>	<b>4.2</b>	<b>6.6</b>	<b>7.3</b>	<b>4.7</b>	<b>5.3</b>	<b>3.6</b>	<b>4.5</b>	<b>5.5</b>	<b>8</b>	<b>8.2</b>	<b>7.9</b>	<b>8.2</b>	<b>8.5</b>	<b>3.7</b>

### Data sources:

**Data in normal font:** Own calculations based on: 1. Eurostat. Financial account – annual, mil. national currency. Last updated 17 Jan 2018, extracted 19 Jan 2019.

<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tipsbp18&language=en> and 2. Eurostat. Gross domestic product – annual, current prices, mil. national currency. Last updated 17 Jan 2019, extracted 19 Jan 2019. [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en)

**Data in italics:** Own calculations based on: 3. International Monetary Fund (IMF). Balance of Payment Statistics. Net financial account – annual, mil. USD. Last updated 28 Nov 2018, extracted 19 Jan 2019. <http://api.worldbank.org/v2/en/indicator/BN.FIN.TOTL.CD?downloadformat=csv> and 4. World Bank (WB) and OECD national account data files. Gross domestic product – annual, current prices, mil. USD. Extracted 19 Jan 2019. <http://api.worldbank.org/v2/en/indicator/NY.GDP.MKTP.CD?downloadformat=csv>

**Concept definitions:**

1. **Financial account (Eurostat):** "Financial account covers all transactions associated with changes of ownership in the foreign financial assets and liabilities of an economy. The financial account is broken down into five basic functional categories: Direct investment (divided by instrument into equity and investment fund shares, reinvestment of earnings and debt instruments), Portfolio investment (divided by instrument into equity and investment fund shares, reinvestment of earnings for investment fund shares and debt securities), Financial derivatives and employee stock options, Other investment (divided by instrument into other equity, currency and deposits, loans, insurance, pension schemes and other standardised guarantee schemes, trade credits and advances, other accounts receivable/payable and special drawing rights) and Official reserve assets (divided by instrument into monetary gold, special drawing rights, reserve position in the International Monetary Fund and other reserve assets)."
2. **Gross domestic product (Eurostat):** "GDP at market prices is the final result of the production activity of resident producer units. It is defined in three ways:
  - a. *GDP Output approach:* From the production point of view GDP can be measured as the sum of the following components:  $GDP = \text{Total gross value added (B.1G)} + \text{Taxes less subsidies on products (D.21 less D.31)}$  where  $\text{Gross Value Added (GVA)} = \text{Output (P.1)} - \text{less Intermediate consumption (P.2)}$
  - b. *GDP Expenditure approach:* From the expenditure side, GDP can be measured as follows:  $GDP = \text{Household and non-profit institutions serving households final expenditure (P.3 in S.14+S.15)} + \text{government final consumption expenditure (P.3 in S.13)} + \text{gross fixed capital formation (P.51)} + \text{changes in inventories (P.52)} + \text{acquisition less disposal of valuables (P.53)} + \text{exports (P.6)} - \text{imports (P.7)}$
  - c. *GDP Income approach:*  $GDP = \text{Compensation of employees (D.1)} + \text{gross operating surplus and mixed income (B.2g and B.3g)} + \text{taxes less subsidies on production and imports (D.2 and D.3)}$
  - ...

In particular, different sources are used for calculating the different approaches of GDP mentioned above under '3.4 Concepts and definitions'. If more than one of these approaches is used, their results are usually balanced, i.e. forced to be coherent, so that a single value for GDP is obtained."
3. **Financial account (IMF):** "The net financial account shows net acquisition and disposal of financial assets and liabilities. It measures how net lending to or borrowing from nonresidents is financed, and is conceptually equal to the sum of the balances on the current and capital accounts. Data are in current U.S. dollars."
4. **Gross domestic product (WB/OECD):** "Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices." "GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used."



Table 2. Current account balance as a share of GDP, 1995–2017

country\ year→	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'02-'08 avg.	'09-'17 avg.
Bulgaria	-1.6	4.7	15.3	-0.2	-4.6	-5.3	-5.4	-2.4	-5.3	-6.4	-11.4	-17.2	-23.9	-22.0	-8.3	-1.7	0.3	-0.9	1.3	0.1	0.0	2.3	4.5	-12.7	-0.3
Croatia	-5.8	-4	-10.4	-5.8	-6.4	-2.3	-3.1	-7.2	-6.1	-4.3	-5.3	-6.7	-7.3	-9.0	-5.3	-1.2	-0.8	-0.2	1.0	2.0	4.4	2.4	3.9	-6.6	0.7
Czechia	-2.3	-6.2	-5.8	-1.9	-2.3	-4.4	-4.8	-5.1	-5.7	-3.7	-2.1	-2.5	-4.6	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.2	0.2	1.6	1.1	-3.7	-0.8
Estonia	-4.0	-8.2	-11.2	-8.6	-4.3	-5.4	-7.1	-11.1	-12.9	-12.0	-8.7	-15.0	-15.0	-8.7	2.5	1.8	1.3	-1.9	0.5	0.3	2.0	1.9	3.1	-11.9	1.3
Hungary	-3.1	-3.7	-4.0	-7.1	-7.9	-8.5	-5.8	-6.3	-8.0	-8.5	-7.0	-7.0	-7.1	-7.0	-0.8	0.3	0.8	1.7	3.8	1.5	3.4	6.0	3.0	-7.3	2.2
Latvia	-0.3	-4.7	-5.3	-9.1	-7.2	-3.8	-6.0	-5.4	-7.1	-11.6	-11.7	-20.7	-20.7	-12.3	7.8	2.1	-3.2	-3.6	-2.7	-1.7	-0.5	1.4	-0.8	-12.8	-0.1
Lithuania	-9.2	-8.6	-9.7	-11.6	-10.9	-5.9	-4.7	-5.1	-6.8	-7.6	-7.3	-10.9	-15.5	-13.6	1.4	-1.3	-4.6	-1.4	0.8	3.2	-2.8	-1.1	0.8	-9.5	-0.6
Poland	0.6	-2.1	-3.7	-4	-7.4	-6	-3.1	-2.8	-2.5	-5.5	-2.6	-4.0	-6.3	-6.7	-4.0	-5.4	-5.2	-3.7	-1.3	-2.1	-0.6	-0.3	0.2	-4.3	-2.5
Romania	-4.4	-6.5	-5.3	-6.8	-4.2	-3.8	-5.6	-3.4	-5.9	-8.3	-8.6	-10.3	-13.5	-11.5	-4.7	-5.1	-4.9	-4.8	-1.1	-0.7	-1.2	-2.1	-3.4	-8.8	-3.1
Slovakia	2.7	-9.7	-8.8	-9.6	-4.5	-3.1	-8	-7.6	-4.9	-10.1	-10.6	-9.5	-5.9	-6.5	-3.4	-4.7	-5.0	0.9	1.9	1.1	-1.7	-1.5	-2.1	-7.9	-1.6
Slovenia	-0.5	0.1	0.1	-0.7	-3.3	-2.8	0.0	0.9	-0.8	-2.7	-1.8	-1.8	-4.1	-5.3	-0.6	-0.1	0.2	2.1	4.4	5.8	4.5	5.5	7.1	-2.2	3.2
ECE-11 avg.	-2.5	-4.5	-4.4	-5.9	-5.7	-4.7	-4.9	-5.0	-6.0	-7.3	-7.0	-9.6	-11.3	-9.5	-1.6	-1.7	-2.1	-1.2	0.7	0.9	0.7	1.5	1.6	-8.0	-0.1
EU-15 avg.	1.8	1.5	1.8	1.2	0.9	0.5	0.6	1.1	0.8	1.4	0.5	0.3	-0.3	-1.1	-0.5	-0.2	0.3	1.3	2.2	2.1	2.3	1.9	3.0	0.4	1.4
Germany	-1.2	-0.7	-0.5	-0.7	-1.4	-1.7	-0.4	1.9	1.4	4.5	4.6	5.7	6.7	5.6	5.7	5.6	6.1	7.0	6.7	7.5	8.9	8.5	7.9	4.3	7.1

**Data sources:**

**Data in normal font:** 1. Eurostat. Current account balance as a share of GDP. Last updated on 11 Sep 2018, extracted on 29 Sep 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop\\_gdp6\\_q&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop_gdp6_q&lang=en)

**Data in italics:** 2. International Monetary Fund (IMF). World Economic Outlook October 2017. Current account balance as a share of GDP. Extracted on 29 Sep 2018.

[https://www.imf.org/external/datamapper/BCA\\_NGDPD@WEO/OEMDC/ADVEC/WEOWORLD/HRV/CZE/LVA/LTU/POL/ROU/SVK](https://www.imf.org/external/datamapper/BCA_NGDPD@WEO/OEMDC/ADVEC/WEOWORLD/HRV/CZE/LVA/LTU/POL/ROU/SVK)

**Concept definitions:**

1. **Current account (Eurostat):** "Current account (BoP item CA = sum of items G + S + IN1 + IN2). The Current account shows the flows of goods, services, primary income and secondary income between resident and non-resident units.

a.1 - Goods (BoP item G): BoP item Goods covers general merchandise, non-monetary gold and, since the implementation of the BPM6, net export of goods under merchanting (sic). The most important component, General merchandise, includes all movable goods whose ownership is transferred from a resident to a non-resident and vice versa. When calculating the balance of payments, both exports and imports of Goods should be valued free-on-board (f.o.b.). When a cost-insurance-freight (c.i.f.) valuation is provided, freight and insurance components have to be estimated separately and eliminated from the trade figures to arrive at a f.o.b. valuation. These components are then recorded in the services account.

a.2 - Services (BoP item S = sum of items SA +SB + SC + SD+SE+SF+SG+SH+SI+SJ+SK +SL). Services are the second major category of the current account. In the production of data on International Trade in Services the references are the IMF's BPM6 and the United Nations' Manual on Statistics of International Trade in Services 2010. Services' items Manufacturing services on physical inputs owned by others (SA) and Maintenance and repair services n.i.e (SB) were newly introduced in services account under BPM6. Transport (SC) covers services provided by all modes of transport – sea, air, and other, which includes space, rail, road, inland waterway and pipeline – that are performed by residents of one economy for those of another. The different types of services offered include transport of passengers, transport of freight, other supporting and auxiliary services (e.g., storage and warehousing), postal and courier services and electricity transmission. The debit side of the item Travel (SD) consists of goods and services which are acquired by residents who stay abroad for less than one year. The credit side includes purchases of the same type made by foreign travellers on the national territory. This item contains two main categories of travel: business travel and personal travel (leisure, study, health-related purposes, etc.). Note that international transport costs of the traveler to destination are recorded under the heading "transport", but all movements within the country, including cruises, are entered under "travel".

Other categories of services are:

- Construction services (SE);
- Insurance services (SF),
- Financial services (SG), which include explicitly charged and other financial services, and financial intermediation services indirectly measures (FISIM),
- Charges for the use of intellectual property n.i.e. (SH),
- Telecommunications, computer and information services (SI),
- Other business services (SJ) which include research and development services, professional and management consulting services, and technical, trade-related and other business services,
- Personal, cultural and recreational services (SK),
- Government goods and services n.i.e (SL).

a.3 - Income (BoP item IN1): Income covers three types of transactions between residents and non-residents. Compensation of employees records wages, salaries and other benefits, in cash or in kind, earned by individuals for work performed for economic units whose place of residence is different from their own (border workers, seasonal workers, employees of international organisations, etc.). BoP item Compensation of employees records money paid to non-resident workers or received from non-resident employers. Investment income is income derived from ownership of external financial assets and liabilities and payable by residents of one economy to residents of another economy. In line with the related financial account, Investment income is classified in Direct investment, Portfolio investment, and Other investment and reserve assets income. It includes interest, dividends, remittances of branch profits, and direct investor's shares of the retained earnings of direct investment enterprises; income on equity and investment fund shares, as well as on debt securities from portfolio investment; income from interest, withdrawals from income of quasi corporations and income attributable to policyholders in insurance, pension schemes and standardised guarantee schemes. Other primary income includes rent, taxes and subsidies on products and production. Detailed data for Foreign Direct Investments income (FDI), with a breakdown by partner country and by kind of activity, are available in a separate table.

a.4 - Secondary income (BoP item IN2): IT is a counterpart entry, required by the double-entry system used in BoP compilation, that offsets the provision of a non-financial, or financial, item by a resident to a nonresident (or vice versa) without a counterpart return of an item of economic value. Secondary income consists of all transfers, which are not capital (see below). Current transfers are broken down, according to the sector of the compiling economy, into two subcomponents: general government and other sectors.

General government transfers are broken down into:

- (a) Current taxes on income, wealth, etc.,
- (b) Social contributions,
- (c) Social benefits,
- (d) Current international cooperation, and
- (e) Miscellaneous current transfers.

Other sectors' transfers are broken down into:

- (a) Current taxes on income, wealth, etc.,
- (b) Social contributions,
- (c) Social benefits,
- (d) Net nonlife insurance premiums,
- (e) Nonlife insurance claims,
- (f) Miscellaneous current transfers, which includes personal transfers between resident and non-resident households, including workers' remittances."

2. **Current account (IMF):** "The current account is the record of all transactions in the balance of payments covering the exports and imports of goods and services, payments of income, and current transfers between residents of a country and nonresidents."

Table 3. Daily average volume of FX trading, mil. USD, April 1998 – April 2016

country↓ year→	1998	2001	2004	2007	2010	2013	2016
Bulgaria				536.00	865.57	1613.08	1766.81
Czechia	5128.20	2093.65	2383.47	5028.75	5110.20	4911.55	3821.76
Estonia			228.55	1256.05	1059.15	95.04	
Hungary	1447.71	587.15	2827.31	6857.66	4195.53	3854.10	3305.18
Latvia			2037.87	2589.45	2226.45	2033.66	591.39
Lithuania			1046.81	963.29	1154.18	527.80	233.05
Poland	2664.02	5146.15	6534.51	9225.05	7847.07	7563.83	9115.65
Romania				2520.30	3169.39	3353.76	2887.69
Slovakia		784.95	1604.87	3464.30	443.47	838.22	2434.32
Slovenia		90.89	145.85	293.67			
EU-15	11237.94	10703.79	18813.25	34741.50	28081.01	26804.04	26171.85

**Data source:** Bank for International Settlements (BIS). Triennial Survey of FX and OTC derivatives trading. Last updated 13 Sep 2018, extracted 1 Oct 2018.

<https://stats.bis.org/statx/srs/table/d11.2>

**Concept definitions:** None provided by the BIS. The original table title is: "Turnover of OTC foreign exchange instruments, by country". Further specified as "net-gross basis, April 1995-2016 daily averages".

Table 3.1. Daily average volume of FX trading as a share of GDP, April 1998 – April 2016

country↓ year→	1998	2001	2004	2007	2010	2013	2016
Bulgaria				1.21	1.71	2.89	3.32
Czechia	7.71	3.1	2	2.66	2.46	2.35	1.96
Estonia			1.9	5.65	5.43	0.38	
Hungary	2.97	1.09	2.72	4.9	3.2	2.85	2.63
Latvia			14.18	8.38	9.37	6.72	2.14
Lithuania			4.62	2.42	3.11	1.14	0.54
Poland	1.53	2.7	2.56	2.15	1.64	1.44	1.93
Romania				1.43	1.9	1.75	1.54
Slovakia		2.56	2.8	4.01	0.5	0.85	2.71
Slovenia		0.44	0.42	0.61			
EU-15	2.66	2.4	2.61	2.88	2.24	1.96	2.07

**Data sources:** Own calculations based on: 1. Bank for International Settlements (BIS). Triennial Survey of FX and OTC derivatives trading, Table D11.2. Last updated 13 Sep 2018, extracted 1 Oct 2018. <https://stats.bis.org/statx/srs/table/d11.2> and 2. World Bank (WB) and OECD national account data files. Gross domestic product – annual, current prices, mil. USD. Extracted 19 Jan 2019. <http://api.worldbank.org/v2/en/indicator/NY.GDP.MKTP.CD?downloadformat=csv>

#### Concept definitions:

- Daily average volume of FX trading (BIS):** No definition provided. The original table title is: “Turnover of OTC foreign exchange instruments, by country”. Further specified as “net-gross basis, April 1995-2016 daily averages”.
- Gross domestic product (WB/OECD):** “Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices.” “GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in

current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used."

Table 4. Daily average volume of FX trading by instrument, mil. USD, 1998–2016

country	type ↓ / year →	1998	2001	2004	2007	2010	2013	2016
Bulgaria	total (all instruments)				536.00	865.57	1613.08	1766.81
	spot				348.29	594.83	1211.24	1127.96
	outright forwards				14.36	55.37	36.60	14.62
	FX swaps				168.98	211.38	361.61	624.23
	currency swaps				3.62	4.00	3.64	
	options				0.76			
	share of derivatives in total				<b>35.0%</b>	<b>31.3%</b>	<b>24.9%</b>	<b>36.2%</b>
Czechia	total (all instruments)	5128.20	2093.65	2383.47	5028.75	5110.20	4911.55	3821.76
	spot	2130.40	848.35	954.63	1398.08	1066.82	681.22	615.30
	outright forwards		41.50	70.46	881.63	198.13	258.31	66.70
	FX swaps	2896.80	1138.20	1296.86	2667.35	3775.44	3820.93	3028.08
	currency swaps		5.80	0.55	8.73	34.55	59.12	28.73
	options	101.00	59.80	60.97	72.98	35.26	91.97	82.94
	share of derivatives in total	<b>58.5%</b>	<b>59.5%</b>	<b>60.0%</b>	<b>72.2%</b>	<b>79.1%</b>	<b>86.1%</b>	<b>83.9%</b>
Hungary	total (all instruments)	1447.71	587.15	2827.31	6857.66	4195.53	3854.10	3305.18
	spot	984.07	361.00	686.07	2199.58	763.02	1051.98	710.09
	outright forwards	152.90	62.70	124.64	173.21	262.24	207.14	188.92
	FX swaps	280.00	157.25	1970.88	4342.50	3117.10	2499.55	2345.20
	currency swaps	29.07			0.05		20.86	
	options	1.67	6.20	45.71	142.32	53.17	74.57	60.96
	share of derivatives in total	<b>32.0%</b>	<b>38.5%</b>	<b>75.7%</b>	<b>67.9%</b>	<b>81.8%</b>	<b>72.7%</b>	<b>78.5%</b>
Latvia	total (all instruments)			2037.87	2589.45	2226.45	2033.66	591.39
	spot			1486.88	828.97	779.30	922.55	263.24
	outright forwards			11.94	25.71	11.60	2.64	13.81
	FX swaps			539.05	1734.76	1435.55	1108.48	314.34
	share of derivatives in total			<b>27.0%</b>	<b>67.9%</b>	<b>65.0%</b>	<b>54.6%</b>	<b>55.5%</b>
Lithuania	total (all instruments)			1046.81	963.29	1154.18	527.80	233.05
	spot			932.62	663.70	260.13	167.26	95.87
	outright forwards			17.71	12.25	17.31	2.34	3.35
	FX swaps			96.48	287.28	856.95	357.49	133.81
	currency swaps					19.05		
	options				0.05	0.75	0.72	0.02
	share of derivatives in total			<b>10.9%</b>	<b>31.1%</b>	<b>77.5%</b>	<b>68.3%</b>	<b>58.9%</b>
Poland	total (all instruments)	2664.02	5146.15	6534.51	9225.05	7847.07	7563.83	9115.65
	spot	2123.21	1952.65	1930.76	2405.33	1954.57	2323.55	2082.80
	outright forwards	52.57	37.58	328.74	526.98	317.79	463.85	845.15
	FX swaps	488.24	3155.93	4095.07	5881.18	5367.81	4581.43	5957.76
	currency swaps			3.01	68.40	78.95	125.22	160.22
	options			176.93	343.18	127.95	69.77	69.72
	share of derivatives in total	<b>20.3%</b>	<b>62.1%</b>	<b>70.5%</b>	<b>73.9%</b>	<b>75.1%</b>	<b>69.3%</b>	<b>77.2%</b>



Table 4. Daily average volume of FX trading by instrument, mil. USD, 1998–2016 – continued

country	type ↓ / year →	1998	2001	2004	2007	2010	2013	2016
Romania	total (all instruments)				2520.30	3169.39	3353.76	2887.69
	spot				1011.88	1262.54	908.23	697.33
	outright forwards				105.13	95.07	64.99	42.67
	FX swaps				1392.60	1774.15	2369.01	2120.41
	currency swaps					4.46		20.14
	options				10.70	33.17	11.53	7.14
	share of derivatives in total				59.9%	60.2%	72.9%	75.9%
Slovakia	total (all instruments)		784.95	1604.87	3464.30	443.47	838.22	2434.32
	spot		287.68	145.80	218.07	196.22	120.99	1757.56
	outright forwards		0.37	0.80	8.94	32.87	48.91	22.05
	FX swaps		388.05	1458.28	3194.77	152.93	636.36	631.35
	currency swaps		108.84				0.05	0.05
	options				42.51	61.44	31.92	23.32
	share of derivatives in total		63.4%	90.9%	93.7%	55.8%	85.6%	25.9%
Germany	total (all instruments)	99600.02	91455.16	120444.00	101373.16	108597.78	110881.88	116381.27
	spot	41968.20	26236.79	35856.40	24505.18	30107.18	24150.76	22943.97
	outright forwards	8396.15	11558.37	11748.93	22616.05	8093.70	4042.29	5630.92
	FX swaps	43916.69	50674.26	69925.25	51592.13	63864.28	79136.86	85247.03
	currency swaps	602.02	213.53	175.03	184.71	1343.50	883.76	1437.99
	options	4716.96	2772.21	2738.40	2475.08	5189.13	2668.21	1121.36
	share of derivatives in total	57.9%	71.3%	70.2%	75.8%	72.3%	78.2%	80.3%

**Data sources:** Adapted from and own calculations based on: 1. Bank for International Settlements (BIS). Triennial Survey of FX and OTC derivatives trading, Table D11.5. Last updated 13 Sep 2018, extracted 1 Oct 2018.

<http://stats.bis.org/statx/srs/table/d11.5?o=8:TO1,9:TO1> and 2. World Bank (WB) and OECD national account data files. Gross domestic product – annual, current prices, mil. USD. Extracted 19 Jan 2019.

<http://api.worldbank.org/v2/en/indicator/NY.GDP.MKTP.CD?downloadformat=csv>

#### Concept definitions:

- Daily average volume of FX trading (BIS):** No definition provided. The original table title is: "OTC foreign exchange turnover by country and instrument in April", further specified as "net-gross' basis".
- Gross domestic product (WB/OECD):** "Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices." "GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the

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official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used."

Table 5. Share of non-residents in FX swaps trading daily average volume, mil. USD, 1998–2016

country ↓ year →	April 1998		April 2001		April 2004		April 2007		April 2010		April 2013		April 2016	
indicator	volume	nonres. %	volume	nonres. %	volume	nonres. %	volume	nonres. %	volume	nonres. %	volume	nonres. %	volume	nonres. %
Bulgaria							169	87.6%	211	90.0%	362	87.9%	624	95.8%
Czechia	2897	80.9%	1138	68.4%	1297	87.2%	2667	86.5%	3775	83.2%	3821	70.5%	3028	87.4%
Estonia					104	56.7%	1057	98.3%	973	98.2%	55	78.2%		
Hungary	280	91.4%	157	96.2%	1971	89.3%	4343	89.3%	3117	72.9%	2500	88.2%	2345	92.3%
Latvia					539	96.7%	1735	82.0%	1436	88.5%	1108	96.0%	314	98.4%
Lithuania					96	90.6%	287	89.6%	857	95.1%	357	98.3%	134	92.5%
Poland	488	89.6%	2899	81.5%	4095	89%	5881	89.0%	5368	81.4%	4581	85.5%	5958	86.2%
Romania							1393	91.2%	1774	89.2%	2369	95.2%	2120	95.3%
Slovakia			388	65.7%	1458	92%	3195	96.2%	153	91.5%	636	99.6%	631	99.7%
Slovenia					23	95.7%	60	91.7%						
Germany	43917	84.8%	50674	82.0%	69925	91.8%	51592	80.6%	63864	82.1%	79137	86.2%	85247	86.3%

**Data sources:** Adapted from and own calculations based on:

1. **April 1998:** Bank for International Settlements (BIS). 1999. Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998. Statistical Annex, Table E-11. Accessed at [https://www.bis.org/publ/r\\_fx98statanx.pdf](https://www.bis.org/publ/r_fx98statanx.pdf) on 25 Feb 2019.
2. **April 2001:** Bank for International Settlements (BIS). 2002. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2001. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx02a.pdf> on 25 Feb 2019.
3. **April 2004:** Bank for International Settlements (BIS). 2005. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2004. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx05a.pdf> on 25 Feb 2019.
4. **April 2007:** Bank for International Settlements (BIS). 2007. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2007. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx07a.pdf> on 25 Feb 2019.
5. **April 2010:** Bank for International Settlements (BIS). 2010. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2010. Statistical Annex, Table E.13. Accessed at <https://www.bis.org/publ/rpfx10t.pdf> on 25 Feb 2019.

6. **April 2013:** Bank for International Settlements (BIS). 2013. Triennial Central Bank Survey: Global Foreign Exchange Market Turnover in April 2013. Table 14. Accessed at <https://www.bis.org/publ/rpfx13fxt.pdf> on 25 Feb 2019.
7. **April 2016:** Bank for International Settlements (BIS). 2016. Triennial Central Bank Survey: Global Foreign Exchange Market Turnover in April 2016. Table 14. Accessed at <https://www.bis.org/publ/rpfx16fxt.pdf> on 25 Feb 2019.

**Concept definitions:** None provided by the BIS, only table titles and subtitles as follows:

1. **April 1998:** "Reported foreign exchange turnover net of local inter-dealer double-counting by country and counterparty in April 1998: Foreign exchange swaps: Daily averages in millions of US dollars".
2. **April 2001:** "Foreign exchange turnover net of local inter-dealer double-counting by country and counterparty in April 2001: Foreign exchange swaps: Daily averages in millions of US dollars"
3. **April 2004:** "Foreign exchange swap turnover net of local inter-dealer double-counting by country and counterparty in April 2004: Daily averages, in millions of US dollars"
4. **April 2007:** "Foreign exchange swap turnover by country and counterparty in April 2007: Daily averages, in millions of US dollars"
5. **April 2010:** "Foreign exchange swap turnover by country and counterparty in April 2010: Daily averages, in millions of US dollars"
6. **April 2013:** OTC foreign exchange turnover by country and counterparty in April 2013, 'net-gross' basis: Foreign exchange swaps: Daily averages, in millions of US dollars"
7. **April 2016:** "OTC foreign exchange turnover by country and counterparty in April 2016, 'net-gross' basis: Foreign exchange swaps: Daily averages, in millions of US dollars"

Table 6. Share of short-term (<7 days) maturity instruments in FX swaps trading daily average volume, 1998–2016

country ↓ year →	April 1998	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
Bulgaria					71%	69%	76%
Czechia		75%	70%	77%	84%	72%	73%
Estonia			72%	84%	94%	50%	
Hungary	78%	79%	78%	83%	65%	85%	82%
Latvia			96%	95%	95%	96%	96%
Lithuania			65%	60%	95%	93%	90%
Poland	78%	52%	86%	89%	82%	84%	76%
Romania				83%	79%	84%	92%
Slovakia		46%	90%		82%	78%	52%
Slovenia			53%	49%			
Germany	65%	62%	66%	70%	66%	72%	78%

**Data sources:** Own calculations based on:

1. **April 1998:** Bank for International Settlements (BIS). 1999. Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1998. Statistical Annex, Table E-11. Accessed at [https://www.bis.org/publ/r\\_fx98statanx.pdf](https://www.bis.org/publ/r_fx98statanx.pdf) on 25 Feb 2019.
2. **April 2001:** Bank for International Settlements (BIS). 2002. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2001. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx02a.pdf> on 25 Feb 2019.
3. **April 2004:** Bank for International Settlements (BIS). 2005. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2004. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx05a.pdf> on 25 Feb 2019.
4. **April 2007:** Bank for International Settlements (BIS). 2007. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2007. Statistical Annex, Table E.11. Accessed at <https://www.bis.org/publ/rpfx07a.pdf> on 25 Feb 2019.
5. **April 2010:** Bank for International Settlements (BIS). 2010. Triennial Central Bank Survey: Foreign Exchange and Derivatives Market Activity in 2010. Statistical Annex, Table E.13. Accessed at <https://www.bis.org/publ/rpfx10t.pdf> on 25 Feb 2019.
6. **April 2013:** Bank for International Settlements (BIS). 2013. Triennial Central Bank Survey: Global Foreign Exchange Market Turnover in April 2013. Table 14. Accessed at <https://www.bis.org/publ/rpfx13fxt.pdf> 25 Feb 2019.
7. **April 2016:** Bank for International Settlements (BIS). 2016. Triennial Central Bank Survey: Global Foreign Exchange Market Turnover in April 2016. Table 14. Accessed at <https://www.bis.org/publ/rpfx16fxt.pdf> on 25 Feb 2019.

**Concept definitions:** None provided by the BIS, only table titles, subtitles and notes as follows:

1. **April 1998:** “Maturity breakdown of reported foreign exchange swap transactions net of local inter-dealer double-counting by country in April 1998: Percentage share of country’s total foreign exchange swap transactions”. Note: “Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally.”
2. **April 2001:** An identical text as in the 1998 report with only the year amended.
3. **April 2004:** An identical text as in the 1998 report with only the year amended.

4. **April 2007:** "Foreign exchange swap transactions by country and maturity in April 2007: Percentage share of country's total foreign exchange swap transactions." Note: "Adjusted for local inter-dealer double-counting (ie 'net-gross' basis). Since data on the maturity breakdown were only collected on a gross basis, data on a net basis have been calculated by adjusting the gross data proportionally. Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding."
5. **April 2010:** An identical text as in the 2007 report with only the year amended.
6. **April 2013:** "OTC foreign exchange turnover by country and maturity in April 2013, 'net-gross' basis: Foreign exchange swaps: Percentage share of country's total foreign exchange swaps transactions". An identical note as in the 2007 report.
7. **April 2016:** An identical text as in the 2013 report with only the year amended.

Table 7. Official international reserves, mil. USD, 1990–2017

country ↓ year →	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04
Bulgaria		615.60	1,207.19	960.16	1,311.17	1,545.82	792.94	2,474.09	3,056.37	3,221.77	3,460.26	3,580.33	4,747.05	6,704.78	9,222.15
Croatia			166.80	616.20	1,405.00	1,895.72	2,314.00	2,539.06	2,815.74	3,025.00	3,524.35	4,703.23	5,884.89	8,190.52	8,758.18
Czechia				4,553.33	6,948.56	14,612.71	13,085.46	10,036.53	12,624.70	12,935.82	13,142.17	14,464.23	23,709.98	26,957.13	28,449.49
Estonia			195.54	389.34	446.96	583.10	639.85	760.11	812.97	855.87	922.89	822.53	1,003.25	1,376.80	1,791.84
Hungary	1,166.01	4,017.33	4,457.72	6,744.99	6,777.47	12,017.25	9,757.16	8,436.87	9,347.72	10,983.02	11,217.60	10,755.16	10,383.48	12,793.40	15,965.07
Latvia				504.35	619.98	580.47	728.85	833.33	872.67	944.41	919.29	1,218.40	1,327.32	1,535.11	2,022.25
Lithuania			107.24	412.22	587.34	819.00	834.29	1,062.69	1,460.00	1,242.11	1,358.65	1,669.19	2,413.14	3,449.67	3,593.98
Poland	4,681.14	3,821.74	4,288.11	4,280.95	6,030.78	14,963.09	18,033.03	20,669.56	28,275.17	27,314.09	27,463.55	26,563.12	29,783.70	33,959.62	36,772.66
Romania	1,303.53	1,840.90	2,335.82	1,919.78	3,050.78	2,358.96	2,622.86	4,261.22	3,225.57	2,493.07	3,389.68	4,861.21	7,305.30	9,450.22	16,096.17
Slovakia				491.25	1,771.48	3,448.77	3,497.56	3,302.53	2,936.78	3,430.08	4,075.29	4,186.26	9,195.46	12,148.98	14,911.76
Slovenia		112.25	715.65	787.93	1,499.10	1,820.92	2,297.48	3,314.76	3,638.60	3,168.09	3,196.10	4,397.21	7,063.48	8,598.00	8,899.19
Germany	77,064.21	72,029.87	99,447.87	85,568.99	86,201.02	94,553.87	91,981.62	85,224.67	84,250.66	93,407.21	87,496.91	82,131.85	89,142.56	96,835.22	97,170.00



Table 7. Official international reserves, mil. USD, 1990–2017 – continued

country ↓ year →	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17
Bulgaria	8,694.76	11,756.13	17,537.39	17,922.71	18,526.74	17,233.04	17,271.91	20,502.86	19,883.12	20,105.83	22,163.11	25,191.47	28,377.96
Croatia	8,800.32	11,487.84	13,674.52	12,957.29	14,894.51	14,132.50	14,483.81	14,807.13	17,766.77	15,423.62	14,966.89	14,244.34	18,818.22
Czechia	29,555.16	31,454.31	34,905.32	37,012.92	41,611.04	42,492.62	40,290.57	44,883.29	56,216.92	54,492.78	64,491.02	85,729.45	147,976.38
Estonia	1,947.45	2,786.47	3,269.61	3,972.04	3,981.06	2,567.52	207.46	300.66	314.38	436.78	414.79	352.23	345.04
Hungary	18,603.10	21,590.03	24,051.75	33,873.88	44,182.74	44,988.17	48,834.50	44,670.05	46,507.89	42,018.61	33,124.45	25,824.25	28,002.46
Latvia	2,360.58	4,509.47	5,758.18	5,247.83	6,906.58	7,606.03	6,383.42	7,522.83	7,893.10	3,226.64	3,445.90	3,514.41	4,613.67
Lithuania	3,815.58	5,772.55	7,711.98	6,441.93	6,626.25	6,599.23	8,209.82	8,529.38	8,071.99	8,728.38	1,697.07	2,602.02	4,449.87
Poland	42,560.85	48,474.15	65,734.19	62,167.70	79,576.19	93,488.21	97,856.38	108,902.20	106,211.57	100,430.09	94,910.08	114,372.23	113,267.37
Romania	21,600.26	30,206.55	39,956.50	39,750.07	44,436.89	48,065.35	48,189.02	46,711.39	48,819.82	43,164.16	38,708.86	39,999.30	44,431.99
Slovakia	15,479.63	13,364.00	18,976.08	18,830.59	1,820.51	2,160.59	2,462.44	2,519.01	2,149.85	2,613.88	2,891.57	2,891.66	3,621.90
Slovenia	8,159.72	7,139.43	1,065.55	957.16	1,079.86	1,071.25	991.33	951.92	921.85	1,015.68	856.17	743.24	889.89
Germany	101,675.92	111,637.04	136,234.45	138,043.24	180,847.54	216,497.25	238,854.10	248,856.48	198,208.48	192,750.41	173,682.01	185,285.72	200,091.52

**Data source:** International Monetary Fund (IMF). International Financial Statistics. International reserves, official monetary assets, mil. USD dollars. Accessed at <http://data.imf.org/?sk=4C514D48-B6BA-49ED-8AB9-52B0C1A0179B&sid=1390030341854> on 9 Oct 2019.

**Concept definitions:** No definition provided by the data source, but the following relevant Q&A has been found on the IMF website: "How are reserve assets valued in the International Financial Statistics (IFS)? It is recommended that reserve assets be valued according to market prices on the reference date."

Table 7.1. Official international reserves as a share of GDP, 1990–2017

country ↓ year →	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04
Bulgaria		5.63	11.66	8.87	13.52	11.83	7.84	22.1	20.89	23.87	26.31	25.44	29.17	31.95	35.53
Croatia						8.47	9.77	10.66	11.07	12.93	16.19	20.19	21.89	23.63	21.07
Czechia				11.21	14.61	24.45	19.53	16.24	18.99	19.94	21.32	21.42	28.95	27.06	23.87
Estonia						13.33	13.48	15	14.47	14.94	16.23	13.17	13.7	14	14.86
Hungary		11.56	11.51	16.81	15.7	25.89	20.91	17.84	19.17	22.34	23.71	19.98	15.33	14.99	15.34
Latvia						10.03	12.21	12.77	12.16	12.54	11.58	14.59	13.9	13.07	14.07
Lithuania						10.41	9.95	10.5	12.99	11.32	11.77	13.62	16.9	18.35	15.87
Poland	7.1	4.47	4.55	4.46	5.44	10.53	11.27	12.99	16.21	16.09	15.98	13.94	14.99	15.61	14.41
Romania	3.34	6.35	9.3	7.28	10.14	6.26	7.05	11.89	7.68	6.89	9.05	11.94	15.82	15.79	21.12
Slovakia				2.99	8.82	13.4	12.57	11.94	9.85	11.28	14	13.63	26.21	26	26.05
Slovenia						8.56	10.7	15.98	16.45	13.96	15.71	21.06	29.98	28.95	25.82
Germany	4.37	3.87	4.68	4.14	3.91	3.65	3.67	3.84	3.76	4.25	4.49	4.21	4.29	3.86	3.45

Table 7.1. Official international reserves as a share of GDP, 1990–2017 – continued

country ↓ year →	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17
Bulgaria	29.34	34.45	39.49	32.94	35.71	34.05	30.08	38.04	35.66	35.44	44.15	47.32	49.93
Croatia	19.38	22.77	22.76	18.38	23.75	23.62	23.22	26.18	30.59	26.76	30.28	27.75	34.31
Czechia	21.69	20.23	18.45	15.7	20.18	20.48	17.68	21.64	26.85	26.22	34.52	43.9	68.59
Estonia	13.9	16.43	14.7	16.42	20.26	13.17	0.9	1.3	1.25	1.67	1.84	1.51	1.33
Hungary	16.46	18.73	17.2	21.44	33.83	34.36	34.69	34.94	34.4	29.99	26.96	20.53	20.13
Latvia	13.95	21.03	18.63	14.74	26.39	32.02	22.62	26.75	26.09	10.3	12.78	12.75	15.24
Lithuania	14.6	19.1	19.41	13.46	17.7	17.78	18.88	19.91	17.39	17.99	4.09	6.08	9.43
Poland	13.9	14.06	15.32	11.65	18.09	19.5	18.5	21.76	20.26	18.42	19.88	24.26	21.59
Romania	21.67	24.45	22.71	18.61	25.74	28.84	26.14	27.21	25.49	21.64	21.76	21.3	20.98
Slovakia	24.69	18.93	21.99	18.77	2.05	2.41	2.51	2.7	2.18	2.59	3.3	3.22	3.78
Slovenia	22.45	18.03	2.21	1.72	2.15	2.23	1.93	2.05	1.92	2.04	1.99	1.66	1.82
Germany	3.55	3.72	3.96	3.68	5.29	6.34	6.36	7.02	5.28	4.95	5.15	5.33	5.44

**Data sources:** Own calculations based on: 1. International Monetary Fund (IMF). International Financial Statistics. International reserves, official monetary assets, mil. USD dollars. Accessed at <http://data.imf.org/?sk=4C514D48-B6BA-49ED-8AB9-52B0C1A0179B&sid=1390030341854> on 9 Oct 2019 and 2. World Bank (WB) and OECD national account data files. Gross domestic product – annual, current prices, mil. USD. Extracted 9 Oct 2009. <http://api.worldbank.org/v2/en/indicator/NY.GDP.MKTP.CD?downloadformat=csv>

**Concept definitions:**

1. No definition provided by the data source, but the following relevant Q&A has been found on the IMF website: “How are reserve assets valued in the International Financial Statistics (IFS)? It is recommended that reserve assets be valued according to market prices on the reference date.”
2. **Gross domestic product (WB/OECD):** “Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices.” “GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in

current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used."

Table 8. Financial openness index, 1990–2016

country ↓ year →	'90'	'91'	'92'	'93'	'94'	'95'	'96'	'97'	'98'	'99'	'00'	'01'	'02'	'03'	'04'	'05'	'06'	'07'	'08'	'09'	'10'	'11'	'12'	'13'	'14'	'15'	'16'
Bulgaria					-1.20	-1.20	-0.95	-0.95	-0.95	-0.95	-0.95	-1.20	-1.20	-0.95	-0.69	-0.43	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Croatia							-0.14	-0.14	-0.14	-0.14	-0.14	-0.14	-0.14	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Czechia							-0.14	-0.14	-0.14	-0.14	0.12	1.59	1.85	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Estonia							1.85	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Hungary	-1.91	-1.91	-1.91	-1.20	-1.20	-1.20	-0.14	-0.14	-0.14	-0.14	-0.14	1.33	1.59	1.85	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Latvia							1.85	2.10	2.10	2.10	2.10	2.10	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Lithuania							2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.10	1.85	1.59	1.33	1.07	1.07	1.07	1.33	1.59
Poland	-1.91	-1.91	-1.91	-1.91	-0.84	-0.14	-1.20	-1.20	-1.20	-1.20	-1.20	-1.20	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.07	1.07
Romania	-1.91	-1.91	-0.70	-1.91	-1.91	-1.91	-1.20	-1.20	-1.20	-1.20	-1.20	-1.20	0.01	0.26	1.59	1.85	2.10	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
Slovakia							-1.20	-1.20	-1.20	-1.20	-1.20	-1.20	-1.20	0.01	0.01	0.26	0.52	0.78	1.04	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
Slovenia							-1.20	-0.14	-0.14	-0.14	1.07	1.07	1.07	1.33	1.59	1.85	2.10	2.36	2.10	1.85	1.59	1.33	1.07	1.07	1.07	1.07	1.07
Germany	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36

**Data source:** Chinn-Ito Financial Openness Index. Last updated 7 Sep 2018. Accessed at [http://web.pdx.edu/~ito/kaopen\\_2016.xls](http://web.pdx.edu/~ito/kaopen_2016.xls) on 11 Oct 2018.

**Concept definition:** “The Chinn-Ito index (KAOPEN) is an index measuring a country's degree of capital account openness. The index was initially introduced in Chinn and Ito (Journal of Development Economics, 2006). KAOPEN is based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).”

Table 9. Consumer price inflation, annual change (%), 1990-2016

country ↓ year →	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04
Bulgaria	23.80	338.45	91.30	72.88	96.06	62.05	121.61	1058.37	18.67	2.57	10.32	7.36	5.81	2.16	6.35
Croatia	500.00	122.22	625.00	1500.00	107.33	3.95	4.30	4.17	6.40	4.02	4.61	3.78	1.67	1.77	2.06
Czechia					9.96	9.17	8.80	8.55	10.63	2.14	3.90	4.71	1.79	0.11	2.83
Estonia				89.81	47.65	28.78	23.05	10.58	8.21	3.30	4.02	5.75	3.57	1.34	3.05
Hungary	28.97	34.23	22.95	22.45	18.87	28.30	23.43	18.31	14.18	10.03	9.78	9.16	5.26	4.65	6.78
Latvia			243.27	108.77	35.93	24.98	17.61	8.44	4.66	2.36	2.65	2.48	1.92	2.96	6.22
Lithuania				410.24	72.15	39.66	24.62	8.88	5.07	0.75	1.01	1.36	0.30	-1.15	1.18
Poland	555.38	76.71	45.33	36.87	33.25	28.07	19.82	15.08	11.73	7.28	10.06	5.49	1.90	0.79	3.58
Romania		230.62	211.21	255.17	136.76	32.24	38.83	154.76	59.10	45.80	45.67	34.47	22.54	15.27	11.88
Slovakia					13.41	9.89	5.81	6.11	6.70	10.57	12.04	7.33	3.32	8.55	7.55
Slovenia				32.86	20.99	13.46	9.79	8.36	7.91	6.15	8.88	8.42	7.47	5.58	3.59
ECE-11 avg.	277.04	160.45	206.51	281.01	53.85	25.51	27.06	118.33	13.93	8.63	10.27	8.21	5.05	3.82	5.00
EU-15 avg.	6.33	6.01	4.74	9.79	6.19	4.54	3.74	2.49	2.05	1.58	2.68	3.07	2.54	2.07	1.87
Germany			5.08	4.43	2.74	1.72	1.45	1.88	0.94	0.57	1.47	1.98	1.42	1.03	1.67

Table 9. Consumer price inflation, annual change (%), 1990-2016 – continued

country ↓ year →	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bulgaria	5.04	7.26	8.40	12.35	2.75	2.44	4.22	2.95	0.89	-1.42	-0.10	-0.80
Croatia	3.32	3.19	2.90	6.08	2.38	1.03	2.27	3.41	2.22	-0.22	-0.46	-1.10
Czechia	1.85	2.53	2.93	6.35	1.04	1.41	1.94	3.30	1.43	0.34	0.34	0.64
Estonia	4.09	4.43	6.60	10.37	-0.08	2.98	4.98	3.93	2.79	-0.14	-0.46	0.15
Hungary	3.55	3.88	7.94	6.07	4.21	4.88	3.92	5.67	1.72	-0.22	-0.07	0.40
Latvia	6.72	6.50	10.14	15.43	3.47	-1.07	4.40	2.21	0.00	0.61	0.20	0.13
Lithuania	2.64	3.75	5.73	10.93	4.45	1.32	4.13	3.09	1.05	0.10	-0.88	0.91
Poland	2.11	1.11	2.39	4.35	3.83	2.71	4.26	3.56	1.03	0.11	-0.99	-0.61
Romania	8.99	6.58	4.84	7.85	5.59	6.09	5.79	3.33	3.99	1.07	-0.59	-1.54
Slovakia	2.71	4.48	2.76	4.60	1.62	0.96	3.92	3.61	1.40	-0.08	-0.33	-0.52
Slovenia	2.48	2.46	3.61	5.65	0.86	1.84	1.81	2.60	1.76	0.20	-0.52	-0.06
<b>ECE-11 avg.</b>	<b>3.95</b>	<b>4.20</b>	<b>5.29</b>	<b>8.18</b>	<b>2.74</b>	<b>2.23</b>	<b>3.79</b>	<b>3.42</b>	<b>1.66</b>	<b>0.03</b>	<b>-0.35</b>	<b>-0.22</b>
<b>EU-15 avg.</b>	<b>2.21</b>	<b>2.38</b>	<b>2.67</b>	<b>3.92</b>	<b>0.06</b>	<b>1.87</b>	<b>3.21</b>	<b>2.38</b>	<b>1.24</b>	<b>0.41</b>	<b>0.03</b>	<b>0.41</b>
Germany	1.55	1.58	2.30	2.63	0.31	1.10	2.08	2.01	1.50	0.91	0.23	0.48

**Data source:** International Monetary Fund (IMF). International Financial Statistics. Inflation, consumer prices (annual %). Accessed at <http://api.worldbank.org/v2/en/indicator/FP.CPI.TOTL.ZG?downloadformat=csv> on 15 Oct 2018.

**Concept definition:** “Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.” (IMF)



Table 10. Real effective exchange rate index (2010=100%), 1990–2017

country ↓ year →	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17
Bulgaria	55.69	44	56.72	66.73	68.87	70.45	74.67	77.23	79.77	83.03	83.64	87.1	91.2	99.12	103.07	100	101.04	98.96	99.07	98.23	94.8	94.45	94.89
Croatia	92.48	89.99	89.07	94.21	91.98	89.82	92.57	94.21	95.21	96.43	96.72	97.8	98.21	102.12	103.56	100	97.32	94.9	96.08	96.51	95.12	96.17	96.15
Czechia	59.13	62.31	62.43	68.3	67.57	68.74	72.86	80.64	78.91	79.35	83.31	86.94	89.2	102.59	98.72	100	102.05	99.18	96.96	91.88	91.2	93.44	96.6
Estonia	65.84	70.41	70.35	80.6	84.91	81.38	83.74	85.52	88.35	89.76	90.48	91.48	95.59	101.88	103.96	100	101.11	100.22	103.13	105.98	106.09	107.76	108.48
Hungary	67.42	67.43	70.59	71.43	73.94	74.69	80.56	88.36	89.82	95.12	96.3	91.38	101.34	103.9	98.41	100	99.5	97.6	96.21	92.76	90.65	91.33	92.64
Latvia	67.63	69.56	74.1	81.06	88.38	93.68	93.25	90.51	86.51	87.09	85.59	87.99	93.74	103.33	108.64	100	100.83	99.28	98.33	101.22	101.87	103.2	102.28
Lithuania	48.97	56.27	64.89	74.58	82.3	88.45	88.75	91.08	93.01	92.5	90.83	90.56	93.26	98.9	105.67	100	100.6	98.55	99.41	102.36	102.75	104.76	103.67
Poland	72.29	76.7	78.41	85.58	84.27	92.46	103.44	98.84	88.11	87.11	96.84	98.24	101.32	110.26	94.24	100	97.65	95.53	95.73	96.7	94.28	90.96	93.07
Romania	60.75	54.54	64.09	84.02	72.68	81.6	83.02	83.35	80.97	82.55	97.12	103.6	112.24	106.21	98.52	100	102.86	96.58	100.47	101.83	99.25	98	96.08
Slovakia	51.36	51.08	53.5	54.72	53.66	59.07	60.06	61.55	69.52	76.35	78.23	82.18	90.12	97.78	104.48	100	101.11	101.16	102.13	102.36	100.07	100.57	100.1
Slovenia	98.15	92.71	92.6	97.86	98.86	96.01	95.6	97.51	100.51	100.05	98.26	97.61	98.85	100.39	102.72	100	99.29	98.06	99.39	100.51	98.47	98.91	98.22
<b>ECE-11 avg.</b>	<b>67.25</b>	<b>66.82</b>	<b>70.61</b>	<b>78.1</b>	<b>78.86</b>	<b>81.49</b>	<b>84.41</b>	<b>86.25</b>	<b>86.43</b>	<b>88.12</b>	<b>90.67</b>	<b>92.26</b>	<b>96.82</b>	<b>102.41</b>	<b>102</b>	<b>100</b>	<b>100.31</b>	<b>98.18</b>	<b>98.81</b>	<b>99.12</b>	<b>97.69</b>	<b>98.14</b>	<b>98.38</b>
<b>EU-15 avg.</b>	<b>102.64</b>	<b>102.22</b>	<b>99.51</b>	<b>100.25</b>	<b>99.89</b>	<b>99.06</b>	<b>96.12</b>	<b>97.89</b>	<b>102.46</b>	<b>103.88</b>	<b>102.39</b>	<b>102.08</b>	<b>103.1</b>	<b>103.28</b>	<b>103.05</b>	<b>100</b>	<b>100.35</b>	<b>98.31</b>	<b>99.67</b>	<b>100.14</b>	<b>96.81</b>	<b>97.08</b>	<b>97.23</b>
Germany	119.17	113.54	106.5	107.08	105.52	98.36	98.21	99.03	104.11	105.45	103.54	102.6	103.89	104.48	105.58	100	99.43	96.1	98.19	99.01	94.11	95.58	96.25

**Data source:** Eurostat. Real effective exchange rate index (2010=100). Last updated 1 Aug 2019, extracted 3 Oct 2019.

<https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tipser13>

**Concept definition:** “Real effective exchange rate (REER) aims to assess a country's price or cost competitiveness relative to its principal competitors in international markets. Changes in cost and price competitiveness depend not only on exchange rate movements but also on cost and price trends. The specific REER for the Macroeconomic Imbalances Procedure is deflated by the consumer price indices relative to a panel of 42 countries (double export weights are used to calculate REERs, reflecting not only competition in the home markets of the various competitors, but also competition in export markets elsewhere). The data are expressed as index with base year 2010.” (Eurostat)

Table 11. Central government-issued collateral in the European repo market (share of outstanding), 2002–17

country ↓ time-point →	Dec 2002	Dec 2003	Dec 2004	Dec 2005	Dec 2006	Dec 2007	Dec 2008	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017
Bulgaria					0	0	0	0	0	0	0	0	0			
Czechia			0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
Estonia			0	0	0	0	0	0	0	0	0	0	0			
Hungary			0.1	0.5	1.2	0.2	0.1	0.1	0.1	0.2	0	0.1	0.1	0	0.1	0
Latvia			0	0	0	0	0	0	0	0	0	0	0			
Lithuania			0	0	0	0	0	0	0	0	0	0	0			
Poland			0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Romania						0	0	0	0	0	0	0	0			
Slovakia			0	0	0	0.1	0	0	0	0	0	0	0			
Slovenia			0	0	0	0	0	0.2	0	0	0	0	0			
ECE-11*	0.3*	0.4*	0.2	0.6	1.4	0.5	0.2	0.5	0.3	0.4	0.2	0.3	0.3	0.1	0.3	0.2
EU-15	78.2	72.2	71.3	72.7	66.3	66.2	68.9	57.5	55.8	55.9	59.7	58.8	57.6	56.8	61.8	66
total market**	3377	3788	5000	5883	6430	6382	4633	5758	5908	6127	5611	5499	5500	5608	5656	7250

\* For December 2002 and December 2003, ICMA provided only an aggregate for “EU Accession Countries”, which included Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia, i.e. 8 of ECE-11 countries (without Bulgaria, Croatia and Romania) plus Malta.

\*\* Total outstanding repo market in billions of EUR.

Data sources: Adapted from the following:

1. **December 2002:** International Securities Markets Association (ICMA). 2003. European Repo Market Survey Number 4 - conducted December 2002. Table 3.1, pp. 10-12. Accessed at [https://www.icmagroup.org/assets/documents/ISMA%20European%20repo%20market%20survey%20number%204%20\(December%202002\).pdf](https://www.icmagroup.org/assets/documents/ISMA%20European%20repo%20market%20survey%20number%204%20(December%202002).pdf) on 26 Feb 2019.
2. **December 2003:** International Securities Markets Association (ICMA). 2004. European Repo Market Survey Number 6 - conducted December 2003. Table 3.1, pp. 10-12. Accessed at [https://www.icmagroup.org/assets/documents/ISMA%20European%20repo%20market%20survey%20number%206%20\(December%202003\)\).pdf](https://www.icmagroup.org/assets/documents/ISMA%20European%20repo%20market%20survey%20number%206%20(December%202003)).pdf) on 26 Feb 2019.

3. **December 2004, 2005, 2006:** International Securities Markets Association (ICMA). 2007. European Repo Market Survey Number 12 - conducted December 2006. Appendix C: Summary of survey results, pp. 29–32. Accessed at <https://www.icmagroup.org/assets/documents/ICMA%20European%20repo%20market%20survey%20no%2012%20December%202006.pdf> on 26 Feb 2019.
4. **December 2007, 2008, 2009:** International Securities Markets Association (ICMA). 2010. European Repo Market Survey Number 18 - conducted December 2009. Appendix C: Summary of survey results, pp. 32–33. Accessed at <https://www.icmagroup.org/assets/documents/Market-Info/Repo-Market-Surveys/No--18,-December-2009/ICMA%20ERC%20European%20Repo%20Survey%20December%202009.pdf> on 26 Feb 2019.
5. **December 2010, 2011:** International Securities Markets Association (ICMA). 2012. European Repo Market Survey Number 22 - conducted December 2011. Appendix C: Summary of survey results, pp. 36–40. Accessed at <https://www.icmagroup.org/assets/documents/Market-Info/Repo-Market-Surveys/No--22-December-2011/ICMA%20ERC%20European%20Repo%20Survey%20December%202011.pdf> on 26 Feb 2019.
6. **December 2012, 2013, 2014, 2015, 2016:** International Securities Markets Association (ICMA). 2017. European Repo Market Survey Number 32 - conducted December 2016. Appendix C: Summary of survey results, pp. 35–40. Accessed at <https://www.icmagroup.org/assets/documents/Market-Info/Repo-Market-Surveys/No.-32-December-2016/RepoSurvey-140217.pdf> on 26 Feb 2019.
7. **December 2017:** International Securities Markets Association (ICMA). 2018. European Repo Market Survey Number 34 - conducted December 2017. Appendix C: Summary of survey results, pp. 35–39. Accessed at <https://www.icmagroup.org/assets/documents/Market-Info/Repo-Market-Surveys/No.-34-December-2017/ICMA-ERCC-European-Repo-Survey-December-2017.pdf> on 26 Feb 2019.

**Concept definitions:** Methodological note provided in the ICMA 2018 report (see data source n. 7 above), p. 6: “The survey asked financial institutions operating in a number of European financial centres for the value of the cash side of repo and reverse repo contracts still outstanding at close of business on Wednesday, December 6, 2017. The questionnaire also asked these institutions to analyse their business in terms of the currency, the type of counterparty, contract and repo rate, the remaining term to maturity, the method of settlement and the origin of the collateral. In addition, institutions were asked about securities lending and borrowing conducted on their repo desks. ... Separate returns were made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe. On this occasion, there was no return was made by the London-based European Venues and Intermediaries Association (EVIA), formerly the Wholesale Market Brokers’ Association (WMBA), because of an insufficient number of respondents.”

Table 12. Gross consolidated general government debt as a share of GDP, 1995-2017

country ↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
Bulgaria			92.9	68.3	75.9	71.1	65.1	51.3	43.6	36	26.8	21	16.3	13	13.7	15.3	15.2	16.7	17.1	27.1	26.2	29.6	25.6	36.6
Croatia	22.6	25.5	24.9	22.9	29.1	35.8	37.1	36.3	37.7	39.4	41.3	38.5	37.3	38.3	48.5	56.6	63	69.1	79.9	83.7	83.4	79.9	77.7	48.2
Czechia	13.6	11.7	11.6	14.4	15.6	17.3	24.3	25.3	27.8	29.9	28.6	28.6	28.6	26.2	33.5	37.7	38	44.5	42.5	41.9	40.3	36.8	35.7	28.5
Estonia	8.1	7.4	7	6	6.5	5.1	4.8	5.7	5.6	5.1	4.5	4.4	3.7	4.5	7	6.6	6.1	9.7	10.2	10.5	9.9	9.2	8.7	6.8
Hungary	75.4	66.7	58.4	57.3	59.5	54.2	54.4	56.9	55.9	60.1	59.3	67.7	64.9	67.5	80.7	79.5	71.5	77.6	77.1	75	75.2	76.3	73	67.1
Latvia	13.6	13.3	10.8	9	12.8	11.7	13.9	12.3	13.1	13.4	11.4	9.5	8.1	18	35.6	46.8	43.1	41.2	39	40.9	36.8	40.3	40	23.2
Lithuania	11.5	14.1	15.8	15.9	24.1	23.3	23.3	22.2	20.4	18.7	17.6	17.2	15.9	14.6	28	36.2	37.2	39.8	38.8	40.5	42.6	39.9	39.4	25.9
Poland	46.5	40.3	40.5	36.8	39.6	38	39.2	40.1	43.6	49.9	48.4	47.7	46.5	39.1	52.1	53.4	50	55.2	56.3	49.4	50.3	53.6	51.5	46.4
Romania	5.2	8	13.7	13	19.2	18.5	24	22	19.5	19.2	15.5	12.8	11.1	11.3	21.9	29.5	33.5	37.1	37.2	38.9	37.1	36.9	34.5	22.6
Slovakia	21.6	29.7	32.7	31	49	48.1	48.9	44.1	41.9	42	34.8	33.5	30.3	29.5	36.3	41.2	43.7	52.2	54.7	53.5	52.2	51.8	50.9	41.5
Slovenia	17.1	20.9	21.4	22.4	23.2	25	26	26.8	26.4	26.8	26.3	26	22.8	21.8	34.6	38.4	46.6	53.8	70.4	80.4	82.6	78.7	74.1	38.8
ECE-11 avg.	23.5	23.8	30	27	32.2	31.6	32.8	31.2	30.5	30.9	28.6	27.9	25.9	25.8	35.6	40.1	40.7	45.2	47.5	49.3	48.8	48.5	46.5	35
EU-15 avg.	70.3	70	66.8	64.6	62.9	59	58.4	57.6	57.6	57.5	57.7	55.8	53.4	58.1	68.9	75.8	81.9	85.4	88.4	89.1	86.1	85	83	69.3
ECE-11/EU-15 ratio	33.4%	33.9%	44.9%	41.8%	51.3%	53.7%	56.1%	54.1%	53.0%	53.8%	49.6%	50.1%	48.6%	44.4%	51.7%	52.9%	49.7%	52.9%	53.8%	55.3%	56.6%	57.0%	56.0%	50.5%

Data sources: Extracted and own calculations based on:

1. **For all entries except those below:** Eurostat. General government consolidated gross debt as a share of GDP. Last updated 23 Oct 2018, extracted 21 Jan 2019.  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10dd\\_edpt1&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10dd_edpt1&lang=en)
2. **Denmark 1995-99:** 1. Statistics Denmark, National accounts and government finances. Consolidated general government liabilities (currency and deposits, debt securities, loans) at the end of the year, mil. national currency. Extracted 19 Jan 2019.  
<http://www.statbank.dk/statbank5a/selectvarval/define.asp?PLanguage=1&subword=tabel&MainTable=OFF13&PXSId=180549&tablestyle=&ST=SD&buttons=0> and 2. Eurostat. Gross domestic product – annual, current prices, mil. national currency. Last updated 17 Jan 2019, extracted 19 Jan 2019.  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en)
3. **Croatia 1995-99:** 1. Croatian National Bank (CNB). General government debt, mil. national currency. Last updated 31 Oct 2018, extracted 21 Jan 2019.  
<https://www.hnb.hr/documents/20182/80efd9b4-1b2d-4191-b490-bc4c4cfb81ca> and 2. Eurostat. Gross domestic product – annual, current prices, mil. national currency. Last updated 17 Jan 2019, extracted 19 Jan 2019. [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en)

**Concept definitions:**

1. **General government consolidated gross debt (Eurostat):** "The government debt is defined as the total consolidated gross debt at nominal value at the end of the year in the following categories of government liabilities (as defined in ESA 2010): currency and deposits (AF.2), debt securities (AF.3) and loans (AF.4). At the national level, data for the general government sector are consolidated between subsectors."
2. **Consolidated general government liabilities (Statistics Denmark):** "The purpose of Quarterly financial accounts is to present a detailed picture of the holdings, transactions (buying and selling), other changes in volume and revaluations of financial assets/liabilities analyzed by financial instruments for the general government sector. To ensure international comparability the statistics comply with the European System of Accounts (ESA2010)"
3. **General government debt (CNB):** "The table shows general government sector debt in accordance with the European System of National and Regional Accounts 2010 (ESA 2010), so called 'Maastricht debt' or 'EDP debt', which is gross consolidated debt at nominal value, excluding accrued interest. Interest rates on MoF treasury bills and yields to maturity on the bonds of the Republic of Croatia, for selected currencies, are also shown."
4. **Gross domestic product (Eurostat):** "GDP at market prices is the final result of the production activity of resident producer units. It is defined in three ways:
  - a. *GDP Output approach:* From the production point of view GDP can be measured as the sum of the following components:  $GDP = \text{Total gross value added (B.1G)} + \text{Taxes less subsidies on products (D.21 less D.31)}$  where  $\text{Gross Value Added (GVA)} = \text{Output (P.1)} - \text{less Intermediate consumption (P.2)}$
  - b. *GDP Expenditure approach:* From the expenditure side, GDP can be measured as follows:  $GDP = \text{Household and non-profit institutions serving households final expenditure (P.3 in S.14+S.15)} + \text{government final consumption expenditure (P.3 in S.13)} + \text{gross fixed capital formation (P.51)} + \text{changes in inventories (P.52)} + \text{acquisition less disposal of valuables (P.53)} + \text{exports (P.6)} - \text{imports (P.7)}$
  - c. *GDP Income approach:*  $GDP = \text{Compensation of employees (D.1)} + \text{gross operating surplus and mixed income (B.2g and B.3g)} + \text{taxes less subsidies on production and imports (D.2 and D.3)}$

...

In particular, different sources are used for calculating the different approaches of GDP mentioned above under '3.4 Concepts and definitions'. If more than one of these approaches is used, their results are usually balanced, i.e. forced to be coherent, so that a single value for GDP is obtained."

Table 13. Gross government debt by subsector of government as a share of GDP, 1995–2017

country ↓ year →	1995				1996				1997				1998				1999				2000				2001			
govt branch*	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG
Bulgaria												97.3				69.3				76.1				71.2				65.0
Croatia																								35.5				36.5
Czechia				13.7				11.6				12.3				14.0				15.3				17.0				22.8
Estonia				8.2				7.5				7.0				6.0				6.5				5.1				4.8
Hungary	83.3	1.0	2.1	84.0	71.3	0.8	1.0	71.2	62.7	0.9	0.9	62.0	60.3	1.1	1.2	60.1	60.2	1.0	0.7	59.9	55.3	1.0	0.9	55.3	51.9	1.1	0.4	51.9
Latvia				13.9				13.3				10.6				9.0				12.1				12.1				13.8
Lithuania	11.4	0.1	0.0	11.5	13.7	0.2	0.0	13.9	14.9	0.6	0.1	15.4	15.9	0.9	0.2	16.5	21.6	0.9	0.4	22.7	22.2	1.0	0.8	23.5	21.7	1.2	0.9	22.9
Poland				47.6				42.4				42.3				38.4				39.0	35.1	1.1	1.1	36.5	36.0	1.3	1.2	37.3
Romania	17.9	0.0	18.9	6.6	18.1	0.0	12.6	10.6	18.3	0.0	5.6	14.9	18.9	0.1	4.6	16.7	22.8	0.3	3.2	21.6	23.0	0.4	2.2	22.4	27.2	0.5	2.3	25.7
Slovakia				18.3				21.6				22.1				22.8				23.7				25.9				26.1
Slovenia				21.7				30.5				33.0				33.9				47.1	25.4	0.3	0.5	49.6	25.5	0.4	0.6	48.3
ECE-11 avg.	37.5	0.4	7.0	25.1	34.4	0.3	4.5	24.7	32.0	0.5	2.2	31.7	31.7	0.7	2.0	28.7	34.9	0.7	1.4	32.4	32.2	0.8	1.1	32.2	32.5	0.9	1.1	32.3
EU-15 avg.	77.9	5.5	1.0	67.4	78.4	5.4	1.0	67.7	75.9	5.0	1.0	65.7	73.5	4.8	1.0	63.6	72.4	4.6	1.0	62.8	70.3	4.4	0.9	59.4	69.6	4.4	0.8	58.8

\* Key: CG = central government; LG = local government; SSF = social security fund; GG = general government (consolidated)

Table 13. Gross government debt by subsector of government as a share of GDP, 1995–2017 – continued

country ↓ year →	2002				2003				2004				2005				2006				2007				2008			
govt branch*	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG
Bulgaria				51.4				43.7				36.0				26.8				21.0				16.3				13.0
Croatia				36.6				38.1				40.2				41.1				38.6				37.3				39.0
Czechia				25.9				28.3				28.5				27.9				27.7				27.5				28.3
Estonia				5.7				5.6				5.1				4.5				4.4				3.7				4.5
Hungary	54.7	1.5	0.8	55.3	57.0	1.5	2.0	57.9	57.8	1.6	2.1	58.7	59.1	1.8	2.1	60.5	62.6	2.3	0.6	64.5	63.1	3.0	0.0	65.5	68.6	3.8	0.3	71.6
Latvia				13.0				13.7				14.0				11.4				9.6				8.0				18.2
Lithuania	21.2	1.0	0.7	22.1	19.3	1.1	0.7	20.4	17.7	0.8	0.5	18.7	16.8	0.8	0.3	17.6	16.4	0.9	0.2	17.2	15.0	1.0	0.0	15.9	13.4	1.2	0.1	14.6
Poland	39.9	1.7	1.4	41.8	44.1	1.8	1.0	46.6	42.5	1.8	1.0	45.0	44.0	2.1	0.8	46.4	44.7	2.4	0.4	46.9	42.4	2.2	0.0	44.2	44.5	2.3	0.0	46.3
Romania	26.7	0.5	1.8	24.8	22.7	0.5	1.3	21.3	19.6	0.5	1.0	18.6	15.9	1.2	0.9	15.7	13.3	1.2	0.5	12.3	12.9	1.7	0.2	11.9	12.6	1.8	0.4	12.4
Slovakia				27.3				26.7				26.8				26.3				26.0				22.8				21.8
Slovenia	26.8	0.5	0.6	42.9	26.0	0.6	0.7	41.6	26.5	0.7	0.7	40.6	26.0	0.7	0.1	34.1	25.7	0.7	0.0	31.0	22.6	0.7	0.0	30.1	21.6	0.9	0.0	28.5
ECE-11 avg.	33.9	1.0	1.1	31.5	33.8	1.1	1.1	31.3	32.8	1.1	1.1	30.2	32.4	1.3	0.8	28.4	32.5	1.5	0.3	27.2	31.2	1.7	0.0	25.7	32.1	2.0	0.2	27.1
EU-15 avg.	68.7	4.4	0.8	58.1	67.4	4.5	0.8	58.3	67.7	4.6	0.7	58.4	68.8	4.7	0.7	58.5	67.1	4.7	0.5	56.2	65.5	4.6	0.5	54.1	71.3	4.7	0.6	59.1

\* Key: CG = central government; LG = local government; SSF = social security fund; GG = general government (consolidated)



Table 13. Gross government debt by subsector of government as a share of GDP, 1995–2017 – continued

country ↓ year →	2009				2010				2011				2012				2013				2014				2015			
govt branch*	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG	CG	LG	SSF	GG
Bulgaria				13.7				15.3				15.2				16.7				17.0	26.8	1.2	0.0	27.0	25.9	1.4	0.0	26.0
Croatia				48.3				57.3				63.8				69.4				80.5	82.3	1.7	0.0	84.0	82.2	1.6	0.0	83.8
Czechia				33.6				37.4				39.8				44.5				44.9	39.7	2.7	0.0	42.2	37.9	2.4	0.0	40.0
Estonia				7.0				6.6	3.2	3.2	0.0	6.1	10.8	3.2	0.0	9.7	11.0	3.6	0.0	10.2	11.2	3.8	0.0	10.7	10.8	3.5	0.0	10.0
Hungary	74.2	4.1	0.5	77.8	75.8	4.6	0.4	80.2	76.4	4.3	0.3	80.5	74.8	3.7	0.4	78.4	75.7	1.5	0.0	77.1	76.6	0.1	0.1	76.6	76.6	0.2	0.1	76.7
Latvia				35.8				46.8				42.7				41.2				39.0	40.4	6.0	0.0	40.9	36.8	6.0	0.0	36.8
Lithuania	26.4	1.6	3.2	28.0	33.6	1.6	5.9	36.2	34.0	1.8	7.0	37.2	36.8	1.9	8.4	39.8	35.9	2.0	9.2	38.8	37.6	2.1	9.8	40.5	39.8	1.9	10.1	42.6
Poland	46.8	3.0	0.7	49.4	50.1	3.8	0.8	53.1	51.3	4.2	1.1	54.1	51.0	4.2	1.2	53.7	53.1	4.3	1.9	55.7	48.2	4.5	2.3	50.3	49.2	4.4	2.5	51.1
Romania	21.5	2.2	0.5	22.1	28.7	2.5	0.6	29.7	33.0	2.5	0.5	34.0	35.6	2.6	0.6	36.9	36.4	2.6	0.5	37.5	38.3	2.5	0.5	39.1	37.4	2.5	0.5	37.7
Slovakia				34.6				38.4				46.6				53.8				70.4	53.3	2.2	0.0	80.3	52.2	2.3	0.0	82.6
Slovenia	33.7	1.4	0.0	36.3	36.9	1.7	0.1	41.2	45.0	1.9	0.1	43.7	52.2	2.0	0.1	52.2	68.9	2.0	0.0	54.7	78.7	2.2	0.0	53.5	81.0	2.1	0.0	52.3
ECE-11 avg.	40.5	2.5	1.0	35.1	45.0	2.8	1.6	40.2	40.5	3.0	1.5	42.2	43.5	2.9	1.8	45.1	46.8	2.7	1.9	47.8	48.5	2.6	1.2	49.6	48.2	2.6	1.2	49.1
EU-15 avg.	81.3	5.0	0.9	68.7	89.0	5.2	0.9	75.2	97.6	5.3	1.0	81.0	101.5	5.5	1.2	84.3	107.5	5.6	1.4	87.2	81.5	5.8	1.7	87.4	78.9	5.7	1.7	84.4

\* Key: CG = central government; LG = local government; SSF = social security fund; GG = general government (consolidated)

Table 13. Gross government debt by subsector of government as a share of GDP, 1995–2017 – continued

country ↓ year →	2016				2017			
govt branch*	CG	LG	SSF	GG	CG	LG	SSF	GG
Bulgaria	29.2	1.2	0.0	29.0	25.4	1.2	0.0	25.4
Croatia	78.8	1.4	0.0	80.6	76.2	1.4	0.0	78.0
Czechia	35.9	1.9	0.0	36.8	34.4	1.7	0.0	34.6
Estonia	10.1	3.3	0.0	9.4	9.6	3.2	0.0	9.0
Hungary	76.4	0.2	0.3	76.0	74.4	0.3	0.4	73.6
Latvia	40.6	5.7	0.0	40.5	40.9	5.5	0.0	40.1
Lithuania	37.6	1.6	10.0	40.1	38.1	1.3	8.7	39.7
Poland	52.6	4.1	2.5	54.2	49.2	3.8	0.4	50.6
Romania	37.6	2.2	0.6	37.4	35.7	1.9	0.6	35.0
Slovakia	51.7	2.2	0.0	78.6	51.0	2.1	0.0	73.6
Slovenia	77.2	1.9	0.0	51.8	72.8	1.8	0.0	50.9
ECE-11 avg.	48.0	2.3	1.2	48.6	46.2	2.2	0.9	46.4
EU-15 avg.	78.4	5.6	1.5	83.6	76.7	5.4	1.5	81.2

\* **Key:** CG = central government; LG = local government; SSF = social security fund; GG = general government (consolidated)

**Data source:** Eurostat. Government consolidated gross debt, by sector of government, as a share of GDP mil. EUR. Last updated 23 Oct 2018, extracted 23 Oct 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10dd\\_edpt1&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10dd_edpt1&lang=en)

**Concept definition:** “The government debt is defined as the total consolidated gross debt at nominal value at the end of the year in the following categories of government liabilities (as defined in ESA 2010): currency and deposits (AF.2), debt securities (AF.3) and loans (AF.4). ...The deficit and debt data are reported by subsectors of general government: central government (S.1311), state government (S.1312), local government (S.1313) and social security funds (S.1314).” (Eurostat)

Table 14. General government debt by residual maturity as a share of GDP, 1995–2017

country	residual maturity↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.	ratio 1-/5+
Bulgaria	<1 year	8.58	23.29	8.61	7.84	3.03	2.82	2.94	1.88	0.60	0.99	0.88	1.56	0.79	0.90	0.96	0.93	1.32	2.08	1.01	8.53	1.14	2.83	1.38	3.69	0.11
	1-5 years	16.99	46.06	19.35	10.76	15.05	9.85	5.56	6.18	9.41	9.57	8.28	4.81	3.01	4.13	3.71	6.07	5.64	6.88	7.22	6.05	6.57	4.53	6.69	9.67	
	5> years	51.75	177.34	69.61	48.48	58.28	58.49	56.50	43.34	33.70	25.45	17.63	14.65	12.53	8.00	9.01	8.33	8.25	7.73	8.84	12.55	18.50	22.24	17.58	34.29	
	total	77.31	246.69	97.57	67.08	76.36	71.16	65.00	51.40	43.71	36.00	26.79	21.03	16.32	13.03	13.69	15.32	15.22	16.70	17.07	27.13	26.21	29.60	25.64	47.65	
Croatia	<1 year														7.52	13.82	12.08	10.74	14.44	17.18	14.40	13.77	17.02	12.41	13.34	0.44
	1-5 years														13.65	13.55	20.15	20.89	25.17	27.82	32.66	33.89	29.29	29.09	24.61	
	5> years														17.79	20.88	25.08	32.20	29.84	35.36	36.90	36.02	33.88	35.99	30.39	
	total								36.60	38.08	40.27	41.16	38.64	37.23	38.96	48.25	57.31	63.83	69.45	80.36	83.96	83.69	80.19	77.49	57.22	
Czechia	<1 year	6.69	6.26	6.59	8.88	10.60	11.41	13.34	13.37	11.44	7.11	6.19	4.77	5.20	5.08	4.98	6.14	7.48	7.65	6.91	6.01	6.28	5.08	6.22	7.55	0.67
	1-5 years	4.95	4.62	4.81	5.15	4.65	4.34	5.49	7.19	7.97	8.30	7.70	9.66	7.80	7.75	10.27	11.55	13.19	15.46	16.63	16.86	16.95	17.09	14.56	9.69	
	5> years	2.02	0.76	0.87	0.00	0.00	1.29	3.97	5.36	8.89	13.12	14.00	13.27	14.47	15.42	18.32	19.67	19.16	21.36	21.38	19.30	16.72	14.64	13.90	11.21	
	total	13.66	11.65	12.27	14.02	15.26	17.04	22.80	25.92	28.30	28.53	27.88	27.70	27.47	28.25	33.56	37.36	39.83	44.47	44.91	42.17	39.96	36.81	34.68	28.46	
Estonia	<1 year	0.45	0.31	0.31	0.76	0.76	0.48	0.38	0.12	0.09	0.10	0.45	1.01	0.50	0.64	0.81	0.69	0.68	0.73	0.65	0.67	0.63	0.58	0.51	0.53	0.13
	1-5 years	3.93	4.38	4.23	1.89	1.59	1.06	0.70	2.31	2.19	2.04	2.40	1.19	1.49	1.01	2.56	2.53	1.91	3.22	2.06	2.13	1.99	1.83	1.62	2.18	
	5> years	3.81	2.86	2.45	3.34	4.12	3.58	3.70	3.27	3.34	2.93	1.71	2.20	1.67	2.84	3.67	3.34	3.48	5.78	7.46	7.71	7.24	6.76	6.62	4.08	
	total	8.19	7.55	7.00	5.99	6.47	5.11	4.78	5.70	5.62	5.06	4.55	4.40	3.66	4.49	7.04	6.55	6.07	9.73	10.16	10.51	9.85	9.16	8.74	6.80	
Hungary	<1 year	14.43	17.31	15.44	19.01	19.10	17.03	17.01	19.69	16.49	17.26	16.69	15.21	12.82	14.61	14.28	16.33	16.12	19.80	20.08	15.77	17.52	19.08	18.97	16.96	0.73
	1-5 years	33.23	23.59	26.14	24.90	24.04	25.41	24.39	23.57	24.68	22.01	19.39	22.79	25.09	30.04	35.46	33.34	33.46	33.94	30.92	34.40	35.67	33.60	32.49	28.37	
	5> years	36.32	30.31	20.47	16.20	16.79	12.83	10.54	12.04	16.71	19.45	24.39	26.46	27.56	26.94	28.10	30.59	30.90	24.63	26.14	26.48	23.42	23.19	21.79	23.14	
	total	83.98	71.21	62.04	60.11	59.93	55.26	51.93	55.30	57.89	58.72	60.48	64.46	65.47	71.58	77.84	80.25	80.48	78.37	77.15	76.65	76.61	75.86	73.25	68.47	
Latvia	<1 year																6.86	4.31	3.45	6.61	7.99	2.61	4.85	6.19	5.36	0.29
	1-5 years																23.93	21.53	17.47	13.08	11.35	15.33	17.59	14.31	16.82	
	5> years																16.04	16.83	20.29	19.34	21.60	18.88	17.87	19.47	18.79	
	total	13.87	13.25	10.64	9.02	12.07	12.10	13.85	13.02	13.72	14.04	11.41	9.56	8.05	18.18	35.79	46.84	42.67	41.21	39.03	40.94	36.81	40.31	39.98	23.32	

Table 14. General government debt by residual maturity as a share of GDP, 1995–2017 – continued

country	residual maturity↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.	ratio 1-/5+
Lithuania	<1 year	2.89	5.62	4.50	4.27	5.13	4.06	4.24	4.03	4.67	3.79	3.25	1.05	1.73	1.81	3.45	2.90	6.65	6.33	5.02	6.95	5.12	4.21	5.29	<b>4.22</b>	<b>0.34</b>
	1-5 years	3.26	1.95	5.48	5.96	10.01	12.34	11.84	11.11	6.38	5.08	3.52	2.51	4.88	6.93	9.23	13.87	13.22	10.85	17.25	13.07	15.44	16.46	14.77	<b>9.36</b>	
	5> years	5.38	6.35	5.39	6.31	7.55	7.09	6.83	7.00	9.31	9.79	10.86	13.68	9.27	5.82	15.26	19.45	17.31	22.59	16.49	20.52	22.02	19.27	19.32	<b>12.30</b>	
	total	<b>11.53</b>	<b>13.91</b>	<b>15.37</b>	<b>16.54</b>	<b>22.70</b>	<b>23.49</b>	<b>22.90</b>	<b>22.14</b>	<b>20.37</b>	<b>18.67</b>	<b>17.63</b>	<b>17.24</b>	<b>15.87</b>	<b>14.56</b>	<b>27.95</b>	<b>36.22</b>	<b>37.18</b>	<b>39.77</b>	<b>38.76</b>	<b>40.55</b>	<b>42.58</b>	<b>39.94</b>	<b>39.38</b>	<b>25.88</b>	
Poland	<1 year					7.65	7.11	9.71	11.61	13.16	10.76	9.97	7.39	7.29	8.96	9.10	7.32	7.82	5.73	4.51	4.90	5.73	4.83	5.10	<b>7.82</b>	<b>0.42</b>
	1-5 years					15.19	16.26	17.48	19.10	21.89	23.81	22.35	24.50	19.42	19.29	19.88	22.55	21.70	22.40	25.87	22.60	21.90	25.98	24.19	<b>21.39</b>	
	5> years					16.14	13.09	10.14	11.06	11.55	10.48	14.12	15.05	17.44	18.04	20.45	23.26	24.58	25.58	25.31	22.92	23.66	23.42	21.28	<b>18.29</b>	
	total	<b>47.57</b>	<b>42.41</b>	<b>42.30</b>	<b>38.43</b>	<b>38.98</b>	<b>36.45</b>	<b>37.33</b>	<b>41.78</b>	<b>46.59</b>	<b>45.04</b>	<b>46.44</b>	<b>46.95</b>	<b>44.16</b>	<b>46.30</b>	<b>49.43</b>	<b>53.13</b>	<b>54.10</b>	<b>53.72</b>	<b>55.69</b>	<b>50.41</b>	<b>51.28</b>	<b>54.23</b>	<b>50.57</b>	<b>46.66</b>	
Romania	<1 year				6.02	5.37	9.77	6.22	7.56	5.12	4.18	1.45	1.42	1.64	2.49	7.05	8.98	10.29	10.43	7.88	8.17	3.95	6.88	5.66	<b>6.03</b>	<b>0.60</b>
	1-5 years				5.42	6.72	5.88	7.39	6.37	5.68	5.01	4.93	2.95	4.82	3.78	6.00	10.51	11.60	19.42	20.23	18.56	13.70	15.94	15.59	<b>9.52</b>	
	5> years				5.26	9.50	6.72	12.06	10.84	10.55	9.44	9.33	7.91	5.42	6.15	9.03	10.24	12.10	7.06	9.48	12.49	20.12	14.50	13.83	<b>10.10</b>	
	total	<b>6.57</b>	<b>10.55</b>	<b>14.95</b>	<b>16.69</b>	<b>21.58</b>	<b>22.38</b>	<b>25.67</b>	<b>24.76</b>	<b>21.35</b>	<b>18.64</b>	<b>15.71</b>	<b>12.27</b>	<b>11.88</b>	<b>12.42</b>	<b>22.08</b>	<b>29.72</b>	<b>33.99</b>	<b>36.91</b>	<b>37.59</b>	<b>39.22</b>	<b>37.77</b>	<b>37.32</b>	<b>35.07</b>	<b>23.70</b>	
Slovakia	<1 year											4.04	3.99	3.12	5.50	5.95	4.97	4.70	5.28	3.90	1.76	3.64	4.44	2.26	<b>4.12</b>	<b>0.18</b>
	1-5 years											15.61	14.13	12.83	9.92	14.77	17.17	19.14	22.44	19.82	18.54	16.65	12.08	9.35	<b>15.57</b>	
	5> years											14.47	12.86	14.15	13.04	15.58	19.07	19.84	24.44	31.02	33.22	31.89	35.26	39.34	<b>23.40</b>	
	total	<b>21.67</b>	<b>30.50</b>	<b>32.97</b>	<b>33.86</b>	<b>47.08</b>	<b>49.63</b>	<b>48.28</b>	<b>42.88</b>	<b>41.59</b>	<b>40.64</b>	<b>34.12</b>	<b>30.98</b>	<b>30.10</b>	<b>28.46</b>	<b>36.30</b>	<b>41.20</b>	<b>43.68</b>	<b>52.17</b>	<b>54.74</b>	<b>53.52</b>	<b>52.18</b>	<b>51.77</b>	<b>50.95</b>	<b>41.27</b>	
Slovenia	<1 year	0.04	0.10	0.56	1.04	2.24	3.63	2.45	3.10	3.13	4.21	3.41	2.81	3.10	2.88	5.75	3.53	4.25	8.13	13.13	10.25	15.05	11.70	8.10	<b>4.89</b>	<b>0.23</b>
	1-5 years	4.12	5.37	6.19	7.24	7.58	8.72	7.80	9.68	9.87	12.45	10.69	11.76	8.83	6.46	11.91	13.02	15.85	14.69	21.10	28.55	23.90	23.82	20.28	<b>12.60</b>	
	5> years	14.16	16.13	15.33	14.46	13.91	13.51	15.81	14.49	13.72	10.19	12.19	11.43	10.90	12.46	16.99	21.81	26.53	30.96	36.15	41.57	43.62	43.17	45.71	<b>21.53</b>	
	total	<b>18.31</b>	<b>21.59</b>	<b>22.07</b>	<b>22.75</b>	<b>23.73</b>	<b>25.85</b>	<b>26.07</b>	<b>27.27</b>	<b>26.71</b>	<b>26.85</b>	<b>26.29</b>	<b>26.00</b>	<b>22.83</b>	<b>21.80</b>	<b>34.64</b>	<b>38.36</b>	<b>46.63</b>	<b>53.79</b>	<b>70.38</b>	<b>80.37</b>	<b>82.56</b>	<b>78.68</b>	<b>74.09</b>	<b>39.03</b>	
ECE-11 avg.	<1 year	5.51	8.82	6.00	6.83	6.74	7.04	7.04	7.67	6.84	6.05	5.15	4.36	4.02	5.04	6.61	6.43	6.76	7.64	7.90	7.76	6.86	7.41	6.55	6.57	<b>0.37</b>
	1-5 years	14.33	11.03	10.49	8.76	10.60	10.48	10.08	10.69	11.01	11.03	10.54	10.48	9.80	10.30	12.73	15.88	16.19	17.45	18.36	18.62	18.36	18.02	16.63	13.12	
	5> years	18.91	38.96	19.02	13.43	15.79	14.57	14.94	13.43	13.47	12.61	13.19	13.06	12.60	12.65	15.73	17.90	19.20	20.02	21.54	23.21	23.83	23.11	23.17	18.01	
	total	<b>30.26</b>	<b>46.93</b>	<b>31.72</b>	<b>28.45</b>	<b>32.42</b>	<b>31.85</b>	<b>31.86</b>	<b>31.52</b>	<b>31.27</b>	<b>30.22</b>	<b>28.40</b>	<b>27.20</b>	<b>25.73</b>	<b>27.09</b>	<b>35.14</b>	<b>40.20</b>	<b>42.15</b>	<b>45.12</b>	<b>47.80</b>	<b>49.58</b>	<b>49.05</b>	<b>48.53</b>	<b>46.35</b>	<b>36.47</b>	

Table 14. General government debt by residual maturity as a share of GDP, 1995–2017 – continued

country	residual maturity, year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.	ratio 1-/5+
Austria	<1 year	5.73	5.90	6.83	6.23	5.92	6.17	7.16	8.25	8.13	8.08	7.75	8.68	3.67	8.84	7.01	5.98	7.66	8.54	10.03	7.93	7.95	8.79	7.49	7.33	
	1-5 years	24.54	24.91	25.70	25.91	27.53	28.97	30.92	30.87	26.26	23.04	21.45	16.72	18.40	20.00	27.14	28.13	27.14	26.08	23.88	29.17	30.90	28.87	29.13	25.90	
	5> years	38.05	37.46	30.97	31.72	33.25	30.99	28.65	27.60	31.47	34.07	39.44	41.91	42.97	39.86	45.70	48.60	47.64	47.30	47.36	46.94	45.95	45.39	41.69	39.34	
	total	68.32	68.26	63.49	63.86	66.69	66.13	66.73	66.73	65.85	65.19	68.64	67.31	65.03	68.70	79.85	82.70	82.44	81.92	81.27	84.05	84.79	83.05	78.31	72.58	
Belgium	<1 year	30.81	28.37	27.88	25.84	24.15	21.53	18.00	17.41	17.13	17.12	16.39	16.74	18.85	21.92	23.13	23.22	23.09	20.12	17.22	18.99	16.99	18.09	16.50	20.85	
	1-5 years	43.97	48.59	45.19	44.00	45.95	40.79	40.13	39.67	40.45	35.44	36.70	32.04	28.26	32.29	36.55	35.71	35.41	37.16	36.24	34.04	32.21	27.04	26.37	37.14	
	5> years	55.77	51.02	50.15	48.36	44.32	46.45	49.46	47.63	43.54	43.97	41.58	42.28	39.92	38.32	39.86	40.79	44.10	47.05	52.00	54.55	57.25	60.94	60.53	47.82	
	total	130.55	127.98	123.21	118.20	114.42	108.77	107.59	104.71	101.12	96.53	94.68	91.05	87.03	92.53	99.54	99.72	102.59	104.33	105.45	107.57	106.46	106.06	103.40	105.80	
Germany	<1 year	9.07	10.51	10.58	7.68	8.18	7.91	9.26	10.07	9.61	10.13	10.28	10.96	10.83	10.94	13.10	22.53	21.04	19.07	17.13	16.19	15.21	14.07	12.84	12.49	
	1-5 years	16.92	17.14	16.94	25.54	26.25	25.34	23.82	24.80	27.26	27.40	27.88	26.68	24.93	26.18	29.38	29.76	29.60	30.56	29.30	27.55	25.70	24.52	23.06	25.50	
	5> years	28.79	29.99	31.17	26.20	25.55	25.62	24.66	24.55	26.20	27.23	28.83	28.85	27.90	28.04	30.11	28.67	27.99	30.24	30.99	30.77	29.93	29.26	27.96	28.24	
	total	54.78	57.65	58.69	59.42	59.98	58.86	57.75	59.41	63.07	64.77	66.99	66.49	63.66	65.15	72.58	80.96	78.63	79.86	77.42	74.51	70.84	67.85	63.86	66.23	
Denmark	<1 year	16.26	14.39	15.02	11.80	11.25	10.87	11.67	12.62	12.87	12.08	9.26	6.77	6.24	4.54	6.15	6.90	9.21	8.78	8.24	9.37				10.22	
	1-5 years	30.98	28.91	23.16	25.08	26.32	24.57	22.93	21.65	18.82	18.87	15.92	15.05	10.29	14.18	16.08	19.34	17.37	15.99	12.14	15.98				19.68	
	5> years	24.16	24.97	26.10	23.40	19.19	16.91	13.91	14.81	14.47	13.20	12.24	9.72	10.82	14.59	17.96	16.34	19.49	20.12	23.66	18.92				17.75	
	total	71.39	68.26	64.28	60.28	56.76	52.35	48.51	49.08	46.15	44.16	37.41	31.55	27.35	33.31	40.18	42.59	46.07	44.89	44.05	44.27	39.94	37.90	36.06	46.38	
Spain	<1 year	21.53	24.02	20.97	15.78	12.85	11.36	10.08	10.67	9.51	8.62	7.51	6.93	6.61	8.49	12.40	12.79	14.57	15.53	18.88	18.28	16.90	15.76	14.61	13.68	
	1-5 years	18.55	19.02	18.78	20.34	21.55	21.70	19.79	15.68	15.35	15.37	14.50	14.04	12.75	14.14	19.04	21.55	25.57	31.52	35.91	35.49	34.75	32.76	29.95	22.09	
	5> years	21.63	22.53	24.65	26.41	26.56	24.90	24.30	24.91	22.78	21.27	20.27	17.93	16.23	16.85	21.35	25.80	29.40	38.70	40.66	46.60	47.68	50.45	53.57	28.93	
	total	61.71	65.57	64.40	62.53	60.95	57.96	54.16	51.27	47.64	45.26	42.28	38.90	35.59	39.47	52.78	60.14	69.53	85.74	95.45	100.37	99.33	98.97	98.12	64.70	
Finland	<1 year	10.76	12.80	8.79	4.48	6.62	8.64	8.29	10.35	10.38	7.23	8.00	8.80	7.65	7.56	10.42	11.19	8.07	6.70	6.10	6.62	8.07	9.02	7.73	8.45	
	1-5 years	28.79	26.48	25.57	28.57	22.20	17.06	17.31	14.81	18.18	21.79	18.94	16.47	14.44	14.23	16.99	16.84	18.10	23.93	23.33	23.13	26.69	23.29	23.82	20.91	
	5> years	15.60	16.04	17.89	13.81	15.23	16.79	15.33	15.07	14.24	13.70	13.06	12.91	11.91	10.86	14.29	19.09	22.33	23.28	27.03	30.45	28.79	30.69	29.78	18.62	
	total	55.15	55.32	52.25	46.86	44.05	42.51	40.98	40.23	42.80	42.72	40.00	38.17	33.99	32.65	41.70	47.12	48.50	53.91	56.46	60.20	63.55	63.00	61.33	47.98	

Table 14. General government debt by residual maturity as a share of GDP, 1995–2017 – continued

country	residual maturity ↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.	ratio 1-/5+
France	<1 year	15.12	14.95	15.12	14.08	12.78	12.22	11.73	13.84	15.63	15.47	15.25	12.93	13.58	17.11	21.12	20.46	20.29	19.32	19.23	19.65	18.77	17.48	16.88	16.22	
	1-5 years	21.19	23.23	23.67	23.97	24.02	23.42	23.29	23.15	24.23	24.99	25.74	25.49	25.14	25.46	29.64	30.64	31.74	33.97	34.40	34.93	35.36	36.31	36.03	27.83	
	5> years	19.79	21.82	22.63	23.30	23.70	23.24	23.32	23.27	24.55	25.49	26.40	26.20	25.81	26.21	32.28	34.16	35.80	37.31	39.79	40.31	41.46	44.40	45.62	29.86	
	total	56.11	60.00	61.43	61.35	60.50	58.88	58.34	60.26	64.41	65.94	67.38	64.61	64.54	68.78	83.04	85.26	87.83	90.60	93.41	94.89	95.58	98.19	98.52	73.91	
Greece	<1 year													11.02	13.87	12.53	14.46	22.03	14.52	16.95	16.72	15.55	20.68	17.25	15.96	
	1-5 years													33.01	32.42	47.57	60.74	80.21	28.56	25.22	13.49	14.80	8.68	7.19	31.99	
	5> years													59.07	63.12	66.65	71.06	69.83	116.48	135.24	148.71	145.51	149.13	151.69	106.95	
	total	98.99	101.34	99.45	97.43	98.91	104.94	107.08	104.86	101.46	102.87	107.39	103.57	103.10	109.42	126.75	146.25	172.07	159.56	177.41	178.91	175.86	178.49	176.13	127.49	
Italy	<1 year	39.43	38.92	38.23	36.36	29.23	31.00	31.84	34.25	27.35	27.57	28.37	28.55	26.85	29.12	30.81	29.05	30.26	30.86	32.24	32.36	30.18	30.56	28.17	31.37	
	1-5 years	46.39	45.84	45.35	45.72	50.92	44.64	41.46	36.49	37.64	37.13	36.63	35.30	34.02	29.87	32.70	35.04	33.03	39.29	42.36	43.01	43.29	41.42	42.51	40.00	
	5> years	31.09	31.59	30.19	28.73	29.50	29.48	31.43	31.18	35.50	35.40	36.94	38.71	38.92	43.41	49.04	51.32	53.23	53.21	54.42	56.42	58.09	59.37	60.55	42.07	
	total	116.91	116.34	113.76	110.81	109.66	105.11	104.73	101.92	100.49	100.09	101.94	102.56	99.79	102.41	112.55	115.41	116.52	123.36	129.02	131.79	131.56	131.36	131.22	113.45	
Portugal	<1 year	18.20	21.96	16.83	14.58	12.72	11.66	13.32	13.89	16.86	21.33	21.06	20.30	21.21	20.86	22.92	26.60	22.94	20.40	23.97	22.30	23.73	25.10	25.03	19.90	
	1-5 years	27.75	21.88	21.03	20.00	19.34	19.57	18.80	19.05	19.63	20.93	20.46	22.60	19.82	19.50	24.87	28.41	33.95	37.80	35.59	36.79	30.96	37.83	34.83	25.71	
	5> years	12.36	15.67	17.33	17.25	18.99	19.09	21.30	23.24	22.16	19.74	25.88	26.28	27.41	31.31	35.82	41.18	54.50	68.03	69.49	71.51	74.06	66.28	64.91	36.69	
	total	58.31	59.51	55.18	51.83	51.05	50.32	53.42	56.18	58.65	61.99	67.39	69.18	68.44	71.67	83.61	96.18	111.39	126.22	129.04	130.60	128.76	129.22	124.76	82.30	
Sweden	<1 year	17.50	17.54	16.57	17.84	15.39	13.75	15.19	13.73	13.39	14.10	15.47	13.76	12.37	14.23	12.01	11.60	11.66	11.22	12.44	15.78	13.16	10.98	10.28	13.91	
	1-5 years	32.35	28.89	30.30	27.23	23.32	20.63	19.87	21.44	21.72	19.03	18.56	16.91	13.00	9.93	12.87	13.25	12.71	14.45	14.07	14.85	17.25	16.14	17.39	18.96	
	5> years	19.62	23.41	20.60	21.64	22.49	16.37	17.17	15.06	14.58	15.72	15.07	13.27	13.83	13.58	16.47	13.76	13.46	12.38	14.17	14.83	13.77	15.25	13.16	16.07	
	total	69.47	69.84	67.47	66.71	61.19	50.75	52.22	50.24	49.69	48.85	49.11	43.93	39.21	37.74	41.35	38.60	37.83	38.05	40.68	45.46	44.18	42.36	40.83	48.95	
EU-11 avg.*	<1 year	18.44	18.94	17.68	15.47	13.91	13.51	13.65	14.51	14.09	14.17	13.93	13.44	12.63	14.68	15.60	16.80	17.35	15.91	16.58	16.74	16.65	17.05	15.68	15.54	0.46
	1-5 years	29.14	28.49	27.57	28.64	28.74	26.67	25.83	24.76	24.95	24.40	23.68	22.13	21.28	21.66	26.62	29.04	31.35	29.03	28.40	28.04	29.19	27.69	27.03	26.71	
	5> years	26.68	27.45	27.17	26.08	25.88	24.98	24.95	24.73	24.95	24.98	25.97	25.81	28.62	29.65	33.59	35.52	37.98	44.92	48.62	50.91	54.25	55.12	54.94	34.08	
	total	76.52	77.28	74.87	72.66	71.29	68.78	68.32	67.72	67.39	67.12	67.57	65.21	62.52	65.62	75.81	81.36	86.67	89.86	93.61	95.69	94.62	94.22	92.05	77.25	

\* EU-11 is EU-15 without Ireland, Luxembourg, the Netherlands and the United Kingdom (no data available).

**Data source:** European Central Bank (ECB). Government Finance Statistics. Government debt (consolidated) (as % of GDP). Extracted 23 Oct 2018.

[http://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&MATURITY=TS&MATURITY=TY15&MATURITY=TY5\\_&node=9691279&legendRef=reference&legendPub=published&legendNor=](http://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&MATURITY=TS&MATURITY=TY15&MATURITY=TY5_&node=9691279&legendRef=reference&legendPub=published&legendNor=)

**Concept definition:** ECB follows the ESA 2010 methodology, including its definition of government debt (see Eurostat definition of government debt).

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Bulgaria	interest due in up to 3 months	0.17	0.18	0.20	0.14	0.13	0.13	0.15	0.17	0.14	0.15
	interest due in 3-12 months	0.52	0.53	0.59	0.39	0.39	0.36	0.45	0.46	0.42	0.44
	interest due in 1-2 years	0.68	0.70	0.49	0.50	0.36	0.45	0.51	0.55	0.52	0.51
	principal due in up to 3 months	0.21	0.17	0.30	0.16	0.55	2.28	0.95	0.81	0.65	0.46
	principal due in 3-12 months	0.29	0.21	0.47	0.06	0.75	2.24	0.11	1.98	0.19	1.14
	principal due in 1-2 years	0.18	0.41	0.23	0.93	2.09	1.13	2.96	1.30	0.96	1.25
	total debt service due in up to 2 years	2.05	2.19	2.27	2.18	4.28	6.57	5.14	5.27	2.89	3.96
Croatia	interest due in up to 3 months				0.42	0.50	0.61	0.93	0.65	0.60	0.63
	interest due in 3-12 months				1.24	1.46	1.83	2.82	1.81	1.76	1.84
	interest due in 1-2 years				1.52	1.81	2.30	3.38	2.22	2.23	2.26
	principal due in up to 3 months				1.99	3.81	6.19	1.95	3.67	2.21	2.76
	principal due in 3-12 months				6.35	5.44	6.97	7.38	10.86	5.78	8.01
	principal due in 1-2 years				2.98	5.78	1.08	5.90	3.32	7.70	4.45
	total debt service due in up to 2 years				14.49	18.8	18.97	22.35	22.52	20.27	19.95
Czechia	interest due in up to 3 months	0.23	0.22	0.25	0.29	0.30	0.29	0.25	0.23	0.22	0.25
	interest due in 3-12 months	0.67	0.60	0.73	0.85	0.86	0.83	0.75	0.64	0.61	0.72
	interest due in 1-2 years	0.78	0.71	0.88	1.04	1.03	1.00	0.88	0.76	0.66	0.86
	principal due in up to 3 months	0.76	0.81	1.11	1.87	2.13	0.88	1.24	0.09	2.25	2.03
	principal due in 3-12 months	5.10	6.64	7.21	6.51	4.22	4.74	4.67	4.71	3.80	4.87
	principal due in 1-2 years	3.04	1.51	2.69	3.36	3.28	4.16	4.42	4.90	4.99	3.58
	total debt service due in up to 2 years	10.58	10.48	12.86	13.91	11.8	11.88	12.22	11.33	12.53	12.32



Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Hungary	interest due in up to 3 months	0.64	0.71	0.62	0.65	0.93	0.79	0.81	0.71	0.63	0.72
	interest due in 3-12 months	1.77	2.02	1.80	1.82	2.57	2.31	2.30	2.00	1.76	2.04
	interest due in 1-2 years	1.96	2.45	2.04	2.09	2.84	2.78	2.73	2.38	2.01	2.37
	principal due in up to 3 months	3.35	3.42	2.87	7.74	8.59	5.73	5.77	5.18	5.01	5.47
	principal due in 3-12 months	8.46	9.26	7.55	8.43	11.93	9.18	9.76	11.85	12.65	10.65
	principal due in 1-2 years	7.00	5.78	6.53	8.96	9.01	7.68	9.39	8.14	8.08	7.34
	total debt service due in up to 2 years	23.18	23.64	21.39	29.69	35.86	28.47	30.77	30.24	30.14	28.59
Latvia	interest due in up to 3 months	0.06	0.07	0.09	0.18	0.16	0.21	0.29	0.18	0.16	0.16
	interest due in 3-12 months	0.18	0.21	0.27	0.52	0.44	0.64	0.88	0.47	0.43	0.46
	interest due in 1-2 years	0.23	0.24	0.34	0.62	0.57	0.81	0.82	0.54	0.56	0.54
	principal due in up to 3 months	1.76	0.93	0.99	1.13	0.25	0.13	0.63	3.97	2.30	0.71
	principal due in 3-12 months	1.98	2.03	0.87	0.75	2.66	1.16	0.72	0.08	0.55	1.76
	principal due in 1-2 years	0.57	0.46	1.01	2.00	0.80	1.09	4.03	3.08	1.31	1.83
	total debt service due in up to 2 years	4.78	3.94	3.57	5.21	4.88	4.05	7.37	8.33	5.3	5.46
Lithuania	interest due in up to 3 months		0.62	0.59	0.42	0.40	0.40	0.39	0.35	0.29	0.42
	interest due in 3-12 months		1.88	1.69	1.19	1.15	1.16	1.14	1.04	0.82	1.24
	interest due in 1-2 years		2.27	2.04	1.49	1.25	1.41	1.46	1.13	1.07	1.5
	principal due in up to 3 months		0.65	0.54	3.76	0.43	5.19	3.32	0.39	3.45	1.02
	principal due in 3-12 months		1.04	4.59	0.96	2.70	1.36	0.56	2.65	1.25	2.84
	principal due in 1-2 years		6.65	4.15	1.80	4.54	4.14	3.23	5.32	1.69	3.93
	total debt service due in up to 2 years		13.12	13.6	9.62	10.47	13.67	10.09	10.88	8.56	10.95

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Poland	interest due in up to 3 months	0.38	0.40	0.42	0.50	0.47	0.37	0.34	0.32	0.32	0.38
	interest due in 3-12 months	1.13	1.20	1.21	1.45	1.34	1.07	0.97	0.93	0.93	1.1
	interest due in 1-2 years	1.29	1.45	1.51	1.75	1.62	1.25	1.13	1.11	1.13	1.32
	principal due in up to 3 months	1.51	1.01	1.53	2.64	1.46	0.38	1.39	1.15	0.47	1.24
	principal due in 3-12 months	5.89	4.76	5.27	3.77	2.48	3.88	3.29	2.79	3.61	4.4
	principal due in 1-2 years	5.78	8.27	5.61	5.48	6.44	5.82	4.74	6.06	5.73	5.83
	total debt service due in up to 2 years	15.97	17.09	15.54	15.58	13.81	12.75	11.85	12.36	12.18	14.27
Romania	interest due in up to 3 months	0.11	0.13	0.18	0.27	0.31	0.33	0.31	0.29	0.29	0.25
	interest due in 3-12 months	0.30	0.38	0.49	0.78	0.81	0.91	0.83	0.83	0.83	0.71
	interest due in 1-2 years	0.37	0.40	0.49	0.78	0.90	0.97	0.99	0.99	0.96	0.79
	principal due in up to 3 months	1.28	1.82	1.99	2.66	1.41	1.12	2.49	0.53	1.33	1.56
	principal due in 3-12 months	4.36	4.83	6.46	5.45	4.28	4.22	3.59	3.05	2.40	4.32
	principal due in 1-2 years	0.41	2.44	2.58	3.87	3.89	5.18	2.16	3.12	3.91	3.19
	total debt service due in up to 2 years	6.82	9.99	12.19	13.82	11.59	12.72	10.36	8.82	9.71	10.82
Slovakia	interest due in up to 3 months	0.25	0.29	0.32	0.37	0.40	0.41	0.40	0.33	0.33	0.35
	interest due in 3-12 months	0.70	0.86	0.97	1.08	1.17	1.22	1.16	0.92	1.00	1.03
	interest due in 1-2 years	0.88	1.11	1.17	1.31	1.41	1.50	1.29	1.21	1.22	1.26
	principal due in up to 3 months	3.76	2.95	4.70	3.38	1.79	4.60	3.48	2.98	0.00	1.57
	principal due in 3-12 months	1.71	3.00	4.73	3.53	5.39	0.59	1.88	3.05	3.78	4.55
	principal due in 1-2 years	3.79	3.87	5.25	5.27	5.33	6.15	6.61	3.99	1.97	4.57
	total debt service due in up to 2 years	11.09	12.08	17.14	14.93	15.5	14.47	14.81	12.48	8.29	13.32

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Slovenia	interest due in up to 3 months	0.31	0.33	0.39	0.45	0.57	0.66	0.89	0.60	0.54	0.54
	interest due in 3-12 months	0.87	0.95	1.16	1.38	1.60	1.97	2.63	1.74	1.51	1.59
	interest due in 1-2 years	1.06	1.13	1.53	1.67	2.03	2.40	3.20	2.11	1.78	1.95
	principal due in up to 3 months	4.40	1.09	3.00	1.38	0.49	3.66	2.68	2.21	2.77	1.64
	principal due in 3-12 months	0.13	1.38	0.17	3.47	9.13	3.03	7.58	5.89	2.57	4.69
	principal due in 1-2 years	2.41	3.14	2.80	4.88	3.12	10.51	7.46	4.86	5.51	5.2
	total debt service due in up to 2 years	9.18	8.02	9.05	13.23	16.94	22.24	24.44	17.41	14.69	15.62
ECE-10 *	average total debt service due in up to 2 years	10.46	11.17	11.96	13.27	14.39	14.58	14.94	13.96	12.46	13.53
Austria	interest due in up to 3 months	0.58	0.58	0.60	0.57	0.55	0.57	0.54	0.48	0.44	0.53
	interest due in 3-12 months	1.73	1.75	1.72	1.70	1.59	1.66	1.59	1.41	1.30	1.56
	interest due in 1-2 years	2.12	2.20	2.16	2.02	1.90	2.10	1.90	1.64	1.56	1.9
	principal due in up to 3 months	4.82	3.10	1.40	0.19	0.73	0.24	0.82	3.77	3.98	1.88
	principal due in 3-12 months	0.80	1.64	4.30	6.08	7.92	5.86	5.11	4.07	2.78	4.79
	principal due in 1-2 years	3.54	5.48	5.16	7.45	4.15	4.60	6.01	5.78	7.71	5.41
	total debt service due in up to 2 years	13.58	14.75	15.35	18.01	16.86	15.03	15.97	17.16	17.76	16.07
Belgium	interest due in up to 3 months	0.81	0.80	0.82	0.81	0.79	0.76	0.71	0.68	0.62	0.74
	interest due in 3-12 months	2.30	2.28	2.42	2.33	2.26	2.14	2.09	1.92	1.80	2.13
	interest due in 1-2 years	2.71	2.81	2.81	2.81	2.69	2.69	2.52	2.31	2.25	2.57
	principal due in up to 3 months	8.04	9.01	7.69	8.27	7.18	7.67	5.93	5.94	6.58	6.74
	principal due in 3-12 months	11.94	10.76	9.40	9.19	7.63	6.91	7.31	9.40	7.45	10
	principal due in 1-2 years	8.04	8.97	8.39	7.69	7.93	7.43	8.44	7.45	6.70	7.59
	total debt service due in up to 2 years	33.83	34.63	31.53	31.1	28.48	27.6	26.99	27.7	25.39	29.77

\*ECE-10 is ECE-11 without Estonia, for which ECB data on debt service is not available.

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Germany	interest due in up to 3 months	0.44	0.42	0.40	0.35	0.31	0.27	0.24	0.20	0.19	0.3
	interest due in 3-12 months	1.23	1.18	1.11	0.98	0.89	0.78	0.66	0.58	0.55	0.84
	interest due in 1-2 years	1.41	1.35	1.26	1.15	1.02	0.91	0.79	0.69	0.64	0.98
	principal due in up to 3 months	3.49	5.39	5.83	4.55	4.42	4.39	4.25	3.97	3.13	3.65
	principal due in 3-12 months	8.62	11.91	9.30	8.65	7.86	6.60	6.21	5.47	5.33	7.89
	principal due in 1-2 years	7.69	9.66	8.51	9.54	8.58	8.00	6.77	7.07	6.85	8.04
	total debt service due in up to 2 years	22.88	29.9	26.4	25.22	23.09	20.95	18.91	17.98	16.68	21.71
Denmark	interest due in up to 3 months	0.37	0.38	0.36	0.33	0.30	0.29	0.25	0.22	0.18	0.29
	interest due in 3-12 months	1.09	1.13	1.06	0.99	0.87	0.87	0.72	0.67	0.55	0.84
	interest due in 1-2 years	1.30	1.29	1.26	1.13	1.08	0.99	0.88	0.80	0.71	1
	principal due in up to 3 months	0.11	0.74	2.41	2.74	2.70	1.03	1.84	2.31	1.40	1.92
	principal due in 3-12 months	4.53	4.51	5.03	4.40	3.82	5.88	3.45	2.78	2.77	3.58
	principal due in 1-2 years	5.30	6.17	5.37	4.53	5.46	3.83	3.62	2.72	3.71	4.32
	total debt service due in up to 2 years	12.69	14.21	15.5	14.12	14.22	12.88	10.74	9.49	9.31	11.96
Finland	interest due in up to 3 months	0.29	0.30	0.32	0.30	0.29	0.28	0.27	0.24	0.21	0.27
	interest due in 3-12 months	0.86	0.84	0.93	0.85	0.85	0.80	0.76	0.66	0.61	0.78
	interest due in 1-2 years	0.92	1.06	1.07	1.04	1.01	0.96	0.93	0.79	0.73	0.93
	principal due in up to 3 months	4.43	7.61	2.91	0.10	1.19	2.51	3.01	2.28	3.15	2.39
	principal due in 3-12 months	4.97	2.69	4.67	5.80	4.21	3.64	4.25	5.83	3.93	4.24
	principal due in 1-2 years	4.09	3.38	3.11	3.58	3.94	4.70	6.74	4.29	4.44	4.13
	total debt service due in up to 2 years	15.56	15.88	13.01	11.66	11.5	12.89	15.95	14.09	13.06	12.75

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Greece	interest due in up to 3 months	1.21	1.33	1.38	0.42	0.44	0.33	0.29	0.27	0.30	0.6
	interest due in 3-12 months	3.48	3.82	3.82	1.14	1.19	0.94	0.86	0.73	0.91	1.74
	interest due in 1-2 years	4.30	4.58	4.61	1.25	1.40	1.13	1.00	0.88	1.06	2.06
	principal due in up to 3 months	2.88	6.75	11.58	6.33	6.46	5.23	5.75	6.04	5.68	6.75
	principal due in 3-12 months	9.35	10.72	11.67	7.78	11.23	6.61	4.53	7.40	3.78	7.64
	principal due in 1-2 years	12.51	13.96	14.58	8.95	3.94	2.01	4.81	1.07	4.94	6.98
	total debt service due in up to 2 years	33.72	41.16	47.63	25.88	24.65	16.25	17.24	16.38	16.68	25.76
France	interest due in up to 3 months	0.49	0.51	0.53	0.53	0.52	0.51	0.50	0.47	0.45	0.5
	interest due in 3-12 months	1.43	1.48	1.55	1.55	1.52	1.50	1.45	1.37	1.33	1.46
	interest due in 1-2 years	1.70	1.79	1.83	1.88	1.87	1.84	1.77	1.69	1.63	1.77
	principal due in up to 3 months	6.86	6.02	7.68	6.11	6.81	6.77	6.84	6.39	5.73	6.93
	principal due in 3-12 months	9.10	8.62	8.88	9.33	9.01	9.38	9.05	7.54	7.31	8.53
	principal due in 1-2 years	6.52	6.43	6.96	6.85	7.79	8.07	6.88	6.88	7.54	7.08
	total debt service due in up to 2 years	26.1	24.85	27.43	26.25	27.52	28.08	26.5	24.34	24	26.26
Ireland	interest due in up to 3 months	0.46	0.59	0.56	0.60	0.66	0.62	0.47	0.40	0.37	0.52
	interest due in 3-12 months	1.38	1.80	1.65	1.72	2.01	1.88	1.32	1.20	1.10	1.54
	interest due in 1-2 years	1.81	2.20	2.07	2.11	2.59	2.35	1.72	1.47	1.27	1.92
	principal due in up to 3 months	5.14	3.14	3.43	1.25	3.85	1.93	0.17	0.13	0.32	1.74
	principal due in 3-12 months	3.02	3.57	0.02	3.28	0.22	0.80	3.33	2.65	3.57	2.65
	principal due in 1-2 years	2.82	3.32	3.52	4.34	2.06	4.16	2.43	3.37	4.54	3.62
	total debt service due in up to 2 years	14.61	14.62	11.27	13.29	11.4	11.74	9.43	9.21	11.17	11.98

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Spain	interest due in up to 3 months	0.36	0.44	0.53	0.62	0.72	0.76	0.72	0.62	0.64	0.62
	interest due in 3-12 months	1.08	1.28	1.53	1.83	2.09	2.16	2.07	1.78	1.88	1.79
	interest due in 1-2 years	1.36	1.53	1.82	2.20	2.42	2.58	2.45	2.15	2.29	2.14
	principal due in up to 3 months	4.63	2.67	3.27	4.24	5.08	5.71	4.39	4.49	4.20	4.19
	principal due in 3-12 months	6.97	9.83	10.57	11.04	12.35	12.06	12.45	11.52	10.39	10.7
	principal due in 1-2 years	4.59	6.07	7.60	8.98	10.58	9.57	8.90	8.21	8.67	8.37
	total debt service due in up to 2 years	19	21.82	25.32	28.92	33.23	32.83	30.96	28.75	28.06	27.8
United Kingdom	interest due in up to 3 months	0.56	0.62	0.67	0.63	0.64	0.61	0.54	0.53	0.50	0.58
	interest due in 3-12 months	1.68	1.83	1.93	1.86	1.89	1.81	1.62	1.58	1.47	1.71
	interest due in 1-2 years	2.10	2.24	2.45	2.36	2.35	2.23	2.06	1.98	1.85	2.14
	principal due in up to 3 months	2.12	3.06	3.33	3.37	3.14	3.77	4.59	4.29	3.95	2.87
	principal due in 3-12 months	2.51	3.13	2.76	2.18	3.06	3.94	3.44	4.29	2.86	3.89
	principal due in 1-2 years	3.62	3.32	3.22	4.44	4.50	4.23	4.35	3.43	5.30	4.06
	total debt service due in up to 2 years	12.59	14.2	14.36	14.84	15.57	16.58	16.61	16.09	15.92	15.23
Italy	interest due in up to 3 months	0.74	0.78	0.84	0.87	0.89	0.88	0.82	0.77	0.74	0.81
	interest due in 3-12 months	2.18	2.29	2.46	2.54	2.61	2.55	2.40	2.23	2.19	2.37
	interest due in 1-2 years	2.63	2.77	3.01	3.14	3.15	3.16	2.89	2.73	2.66	2.9
	principal due in up to 3 months	6.33	6.40	6.51	5.05	5.19	5.42	3.16	4.96	5.16	5.69
	principal due in 3-12 months	13.52	11.79	12.78	14.17	15.44	14.97	14.96	14.03	11.69	13.81
	principal due in 1-2 years	10.36	12.06	9.66	10.68	12.57	11.14	13.18	10.95	11.30	11.54
	total debt service due in up to 2 years	35.77	36.09	35.26	36.44	39.84	38.12	37.39	35.67	33.74	37.13

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Luxembourg	interest due in up to 3 months	0.05	0.09	0.08	0.09	0.08	0.08	0.08	0.07	0.08	0.08
	interest due in 3-12 months	0.15	0.27	0.25	0.27	0.26	0.24	0.23	0.23	0.24	0.24
	interest due in 1-2 years	0.20	0.36	0.32	0.20	0.34	0.32	0.30	0.30	0.32	0.3
	principal due in up to 3 months	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
	principal due in 3-12 months	0.00	0.00	0.00	4.53	0.00	0.00	0.00	0.00	0.00	0.37
	principal due in 1-2 years	0.00	0.00	4.63	0.00	0.00	0.00	0.00	0.00	0.36	0.73
	total debt service due in up to 2 years	0.41	0.71	5.28	5.1	0.68	0.63	0.61	0.6	1.01	1.83
Netherlands	interest due in up to 3 months	0.34	0.35	0.38	0.40	0.38	0.33	0.33	0.27	0.25	0.33
	interest due in 3-12 months	0.98	1.00	1.09	1.15	1.10	0.97	0.96	0.78	0.71	0.95
	interest due in 1-2 years	1.13	1.18	1.31	1.41	1.31	1.21	1.15	0.94	0.85	1.14
	principal due in up to 3 months	8.36	7.84	6.91	6.20	4.77	4.06	1.71	3.75	3.34	4.15
	principal due in 3-12 months	5.37	5.09	5.02	3.99	4.26	5.25	4.42	4.20	4.15	5.27
	principal due in 1-2 years	4.49	5.10	4.78	5.06	7.52	4.51	6.30	5.95	4.08	5.36
	total debt service due in up to 2 years	20.67	20.55	19.49	18.20	19.35	16.33	14.86	15.88	13.39	17.19
Portugal	interest due in up to 3 months	0.64	0.66	0.72	0.67	0.64	0.68	0.70	0.71	0.73	0.69
	interest due in 3-12 months	1.83	1.88	2.04	1.97	1.88	2.04	2.09	2.14	2.13	2.02
	interest due in 1-2 years	2.23	2.30	2.55	2.38	2.30	2.50	2.65	2.60	2.63	2.48
	principal due in up to 3 months	5.69	6.34	6.49	4.97	3.98	4.83	4.54	2.78	3.25	4.33
	principal due in 3-12 months	8.66	9.07	7.81	8.30	14.33	9.83	8.18	9.95	8.84	9.58
	principal due in 1-2 years	6.42	4.94	5.71	10.18	6.86	4.89	5.51	4.71	5.80	6.1
	total debt service due in up to 2 years	25.47	25.2	25.32	28.47	29.99	24.77	23.67	22.88	23.37	25.2

Table 15. Debt service due in up to 2 years as a share of GDP, 2009–18 – continued

country	type and maturity of debt service ↓ time-point →	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	avg.
Sweden	interest due in up to 3 months	0.23	0.22	0.22	0.21	0.21	0.17	0.16	0.16	0.14	0.18
	interest due in 3-12 months	0.68	0.62	0.64	0.62	0.52	0.49	0.46	0.45	0.41	0.52
	interest due in 1-2 years	0.79	0.77	0.76	0.69	0.61	0.56	0.55	0.54	0.46	0.61
	principal due in up to 3 months	2.09	4.79	2.98	3.23	3.03	5.78	6.67	2.74	4.01	3.25
	principal due in 3-12 months	2.40	2.30	3.57	1.51	4.37	4.85	3.88	3.96	1.55	3.29
	principal due in 1-2 years	5.02	3.80	1.38	3.88	4.80	7.48	4.39	3.24	4.96	3.9
	total debt service due in up to 2 years	11.21	12.5	9.55	10.13	13.54	19.34	16.1	11.09	11.53	11.75
EU-15	average total debt service due in up to 2 years	19.87	21.4	21.51	20.51	20.66	19.6	18.8	17.82	17.4	19.49

**Data source:** European Central Bank (ECB). Government Finance Statistics. Government debt (consolidated) (as % of GDP). Extracted 14 Nov 2018.

[https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART\\_AREA=W2&REF\\_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor](https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART_AREA=W2&REF_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor)

**Concept definition:** ECB follows the ESA 2010 methodology, including its definition of government debt (see Eurostat definition of government debt).



Table 16. Interest payable on general government debt as a share of GDP, 1995–2017

country ↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bulgaria	9.8	15.8	6.5	3.6	3.6	4.1	4.2	2.2	2.2	1.9	1.6	1.3	1.1	0.8	0.7	0.7	0.7	0.8	0.7	0.9	0.9	0.9	0.8
Croatia							1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.3	2.4	2.7	3.1	3.2	3.4	3.5	3.1	2.7
Czechia	1.0	1.1	1.1	1.1	0.9	0.8	0.9	1.1	1.0	1.1	1.1	1.0	1.1	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.1	0.9	0.7
Estonia	0.5	0.6	0.4	0.6	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Hungary	8.7	9.0	8.4	7.0	6.7	5.3	4.7	4.0	4.0	4.3	4.1	3.9	4.0	4.0	4.5	4.1	4.1	4.6	4.5	4.0	3.5	3.2	2.8
Latvia	0.8	1.3	0.9	0.6	0.6	0.9	0.9	0.7	0.7	0.7	0.5	0.4	0.4	0.6	1.5	1.7	1.8	1.7	1.5	1.4	1.3	1.0	0.9
Lithuania	0.3	0.8	0.7	1.1	1.5	1.7	1.5	1.3	1.2	0.9	0.8	0.7	0.7	0.7	1.2	1.8	1.8	2.0	1.8	1.6	1.5	1.3	1.1
Poland						3.0	3.1	2.9	3.0	2.7	2.5	2.4	2.2	2.1	2.5	2.5	2.5	2.7	2.5	2.0	1.8	1.7	1.6
Romania	1.6	1.8	4.4	4.0	5.0	3.9	3.4	2.5	1.6	1.4	1.2	0.8	0.7	0.7	1.4	1.5	1.6	1.7	1.8	1.7	1.6	1.5	1.3
Slovakia	2.3	2.5	2.4	2.5	3.3	4.0	3.9	3.5	2.5	2.1	1.7	1.4	1.4	1.3	1.4	1.3	1.5	1.8	1.9	1.9	1.7	1.6	1.4
Slovenia	2.1	2.0	2.3	2.1	2.3	2.4	2.3	2.1	1.9	1.7	1.5	1.4	1.2	1.1	1.3	1.6	1.9	2.0	2.6	3.2	3.2	3.0	2.5
ECE-11 avg.	3.0	3.9	3.0	2.5	2.7	2.6	2.4	2.0	1.8	1.7	1.6	1.4	1.4	1.3	1.7	1.7	1.8	2.0	2.0	2.0	1.8	1.7	1.4
EU-15 avg.	5.4	5.2	4.7	4.3	3.8	3.5	3.3	3	2.8	2.6	2.5	2.4	2.4	2.5	2.4	2.6	2.9	2.9	2.7	2.6	2.3	2.1	1.9

**Data source:** Eurostat. Interest, payable (on general government debt) – as a share of GDP. Last updated 23 Oct 2018, extracted 24 Oct 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10dd\\_edpt1&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10dd_edpt1&lang=en)

**Concept definition:** Interest payable is defined as an auxiliary indicator to general government debt (see Eurostat definition of government debt).

Table 17. Share of general government debt held by non-residents, 1995–2017

country ↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	59.17	74.52	77.92	77.66	77.97	78.15	77.89	72.66	69.95	67.96	60.96	60.96	59.36	53.53	57.22	51.11	46.43	51.11	47.74	52.49	47.44	48.01	43.48	<b>61.46</b>
<b>Croatia</b>	37.87	48.46	56.94	57.84	62.85	64.01	62.31	56.95	58.51	56.56	49.66	47.77	50.38	47.3	47.61	44.84	41.86	42.14	42.92	42.5	41.63	38.55	39.02	<b>49.5</b>
<b>Czechia</b>	31.24	26.42	24.79	13.47	10.69	9.05	5.21	5.1	7.9	20.47	26.85	27.21	27.54	28.15	29.91	30.72	30.5	29.72	32.51	29.64	36.89	44.79	45.45	<b>24.97</b>
<b>Estonia</b>	68	59.99	56.33	68.14	62.45	65.81	57.86	51.03	50.83	52.85	48.41	50.48	36.48	36.66	46.08	37.72	37.45	62.49	63.73	65.14	65.1	64.89	61.73	<b>55.2</b>
<b>Hungary</b>	7.48	7.11	7.62	10.09	20.84	26	30.53	33.3	39.37	42.95	46.22	46.87	49.29	51.61	55.49	56.72	65.02	61.98	58.16	54.69	47.87	41.8	37.51	<b>39.06</b>
<b>Latvia</b>														51.75	77.31	79.65	78.92	79.95	80	78.65	71.67	71.96	66.87	<b>73.67</b>
<b>Lithuania</b>	76.43	76.83	60.43	61.1	72.62	67.9	65.45	60.68	62.03	62.94	62.67	71.29	70.54	67.87	72.81	75.49	75.04	75.73	70.38	72.95	71.73	69.37	73.42	<b>69.38</b>
<b>Poland</b>					50.78	50.21	40.22	40.76	42.01	40.94	41.86	39.71	37.41	34.44	37.88	43.42	49.02	52.78	50.73	57.93	57.78	54.4	52.49	<b>46.04</b>
<b>Romania</b>	79.48	64.18	60.69	57.13	56.06	64.86	69.32	70.81	79.78	75.01	80.65	78.44	63.91	58.38	47.47	47.95	48.62	50.63	54.48	52.12	49.44	48.01	48.52	<b>61.13</b>
<b>Slovakia</b>	33.57	27.66	31.64	39.67	37.14	40.35	40	36.78	35.51	40.34	38.79	40.94	37.87	37.96	34.5	36.46	39.68	46.86	60.65	60.57	53.24	52.45	57.49	<b>41.74</b>
<b>Slovenia</b>	15.52	35.66	37.71	35.2	40.03	43.02	43.23	37.33	33.36	28.79	25.91	28.1	37.75	44.62	51.31	57.06	55.59	58.57	61.26	68.73	67.27	63.15	61.95	<b>44.83</b>
<b>ECE-11 avg.</b>	<b>45.42</b>	<b>46.76</b>	<b>46.01</b>	<b>46.7</b>	<b>49.14</b>	<b>50.93</b>	<b>49.2</b>	<b>46.54</b>	<b>47.92</b>	<b>48.88</b>	<b>48.2</b>	<b>49.18</b>	<b>47.05</b>	<b>46.57</b>	<b>50.69</b>	<b>51.01</b>	<b>51.65</b>	<b>55.63</b>	<b>56.6</b>	<b>57.76</b>	<b>55.46</b>	<b>54.31</b>	<b>53.45</b>	<b>50.22</b>
<b>EU-11 avg.*</b>	<b>33.32</b>	<b>33.9</b>	<b>35.76</b>	<b>37.83</b>	<b>42.17</b>	<b>44.89</b>	<b>47.87</b>	<b>50.87</b>	<b>51.61</b>	<b>53.37</b>	<b>54.27</b>	<b>54.66</b>	<b>56.14</b>	<b>57.12</b>	<b>56.16</b>	<b>53.75</b>	<b>52.98</b>	<b>53.01</b>	<b>53.51</b>	<b>55.29</b>	<b>53.1</b>	<b>48.91</b>	<b>46.18</b>	<b>48.99</b>

\* EU-11 is EU-15 without Greece, Ireland, Luxembourg and the United Kingdom, for which no data is available in the ECB database.

**Data source:** European Central Bank (ECB). Government Finance Statistics. Government debt (consolidated) (as % of GDP). Extracted 14 Nov 2018.

[https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART\\_AREA=W2&REF\\_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor](https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART_AREA=W2&REF_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor)

**Concept definition:** ECB follows the ESA 2010 methodology, including its definition of government debt (see Eurostat definition of government debt).

Table 18. Share of FX debt in general government debt, 1995–2017

country ↓ year →	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	71.35	89.08	94.72	94.85	95.21	94.94	94.36	91.33	90.54	87.48	84.21	80.85	76.93	75.55	76.94	75.43	74.60	79.03	73.38	80.95	79.03	81.01	78.37	<b>83.48</b>
<b>Croatia</b>														74.07	77.74	78.34	78.33	77.36	78.84	80.00	79.56	77.86	76.33	<b>77.84</b>
<b>Czechia</b>	27.50	24.59	23.56	13.75	11.20	9.11	2.99	2.54	5.48	8.21	11.46	10.55	9.48	13.99	16.61	18.22	21.07	23.93	24.98	20.61	20.16	19.15	16.02	<b>15.44</b>
<b>Estonia</b>	36.31	30.47	27.04	31.56	29.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>6.72</b>
<b>Hungary</b>	7.42	6.59	41.45	39.93	38.18	36.41	31.37	25.72	25.50	27.46	29.77	29.73	32.24	40.64	47.04	47.63	52.35	44.09	43.04	40.87	36.85	30.60	25.79	<b>33.94</b>
<b>Latvia</b>																13.90	16.97	22.96	23.42	21.16	17.57	15.79	7.52	<b>17.41</b>
<b>Lithuania</b>	60.11	60.47	53.77	44.06	43.15	33.54	31.29	13.52	10.90	5.64	2.00	1.20	0.02	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>15.64</b>
<b>Poland</b>						46.79	38.49	34.16	32.84	26.85	27.91	26.27	24.40	26.29	26.30	27.30	31.28	30.81	29.76	35.17	34.82	34.96	31.72	<b>31.45</b>
<b>Romania</b>	79.48	66.90	62.05	66.35	65.24	64.09	70.57	72.07	80.80	75.90	80.96	78.47	64.06	56.99	57.48	58.69	57.17	58.95	56.74	57.35	53.84	51.99	51.72	<b>64.69</b>
<b>Slovakia</b>	28.32	24.91	29.57	38.96	24.00	19.51	15.22	8.16	3.21	2.15	1.79	0.64	0.59	0.60	0.44	0.34	0.34	5.64	6.95	7.92	6.60	6.00	5.84	<b>10.34</b>
<b>Slovenia</b>	17.39	31.92	29.75	17.25	15.67	14.63	4.10	2.10	1.53	1.13	0.96	0.57	0.46	0.36	0.24	0.22	0.18	9.06	17.42	23.20	21.87	15.83	11.08	<b>10.30</b>
<b>ECE-11 avg.</b>	<b>40.99</b>	<b>41.87</b>	<b>45.24</b>	<b>43.34</b>	<b>40.23</b>	<b>35.45</b>	<b>32.04</b>	<b>27.73</b>	<b>27.87</b>	<b>26.09</b>	<b>26.56</b>	<b>25.36</b>	<b>23.13</b>	<b>28.85</b>	<b>30.28</b>	<b>29.10</b>	<b>30.21</b>	<b>31.98</b>	<b>32.23</b>	<b>33.39</b>	<b>31.85</b>	<b>30.29</b>	<b>27.67</b>	<b>32.25</b>
<b>EU-14 avg.*</b>	<b>10.32</b>	<b>9.85</b>	<b>9.89</b>	<b>8.7</b>	<b>8.42</b>	<b>7.59</b>	<b>7.07</b>	<b>6.14</b>	<b>4.76</b>	<b>4.03</b>	<b>4.07</b>	<b>3.59</b>	<b>3.42</b>	<b>4.76</b>	<b>5.01</b>	<b>4</b>	<b>4.61</b>	<b>4.73</b>	<b>5.13</b>	<b>4.95</b>	<b>4.22</b>	<b>3.95</b>	<b>3.15</b>	<b>5.75</b>

\* EU-14 is EU-15 without Luxembourg.

**Data source:** European Central Bank (ECB). Government Finance Statistics. Government debt (consolidated) (as % of GDP). Extracted 14 Nov 2018.

[https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART\\_AREA=W2&REF\\_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor](https://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASET=0&removeItem=&COUNTERPART_AREA=W2&REF_SECTOR=S13&node=9691279&legendRef=reference&legendPub=published&legendNor)

**Concept definition:** ECB follows the ESA 2010 methodology, including its definition of government debt (see Eurostat definition of government debt).

Table 19. Investment in funded pension arrangements as a share of GDP, 2001–17

country ↓ year →	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
Bulgaria	0.61	1	1.41	1.94	2.4	2.86	3.67	3.17	4.35	5.34	5.69	6.96	8.3	9.79	10.61	11.5	12.92	<b>5.44</b>
Croatia		1.1	2.27	3.5	4.32	5.56	6.77	6.77	9.25	11.58	12.91	16.19	18.39	21.23	23.29	25.5	26.79	<b>12.21</b>
Czechia	2.08	2.51	2.86	3.26	3.78	4.16	4.35	4.76	5.49	5.87	6.14	6.73	7.26	7.86	8.12	8.43	8.83	<b>5.44</b>
Estonia	0.03	0.37	1.2	2.29	3.5	4.67	5.56	5.58	8.28	9.01	8.37	9.83	10.89	12.86	14.56	16.44	17.54	<b>7.7</b>
Hungary	3.85	4.39	5.15	6.71	8.26	9.52	10.77	9.44	12.91	14.56	3.75	3.86	3.93	4.01	4.02	5.84	5.94	<b>6.88</b>
Latvia	0.3	0.5	0.69	0.94	1.23	1.44	1.92	3.14	6.06	7.45	6.95	7.59	8.43	9.81	11.02	12.71	13.81	<b>5.53</b>
Lithuania										4.05	3.86	4.29	4.61	5.25	5.83	6.66	7.2	<b>5.22</b>
Poland	2.43	3.84	5.32	6.72	8.71	11.09	11.99	10.94	13.32	15.55	14.74	16.98	18.71	9.6	8.77	9.23	10.12	<b>10.47</b>
Romania							0	0.17	0.47	0.88	1.22	1.72	2.3	3.02	3.64	4.33	4.85	<b>2.06</b>
Slovakia	0	0	0.02		0.48	2.35	3.63	4.63	6.19	7.22	8.21	9.38	9.7	10.44	10.19	11.13	11.74	<b>5.96</b>
Slovenia			1.06	1.78	2.45	3.07	3.52	3.8	4.96	5.84	6.04	6.29	6.42	6.81	6.92	6.95	6.92	<b>4.85</b>
ECE-11 avg.	<b>1.33</b>	<b>1.71</b>	<b>2.22</b>	<b>3.39</b>	<b>3.9</b>	<b>4.97</b>	<b>5.22</b>	<b>5.24</b>	<b>7.13</b>	<b>7.94</b>	<b>7.08</b>	<b>8.16</b>	<b>8.99</b>	<b>9.15</b>	<b>9.72</b>	<b>10.79</b>	<b>11.51</b>	<b>6.38</b>
EU-15 avg.	<b>31.99</b>	<b>30.85</b>	<b>33.74</b>	<b>33.72</b>	<b>37.85</b>	<b>39.39</b>	<b>37.29</b>	<b>34.33</b>	<b>38.22</b>	<b>40.79</b>	<b>39.91</b>	<b>43.27</b>	<b>44.29</b>	<b>47.54</b>	<b>47.24</b>	<b>49.54</b>	<b>50.25</b>	<b>40.01</b>

**Data source:** Organisation for Economic Co-operation and Development (OECD). Global Pension Statistics. Pension funds (autonomous) – investment – assets as a share of GDP. Extracted 22 November 2018. [https://stats.oecd.org/Index.aspx?DatasetCode=PNNI\\_NEW](https://stats.oecd.org/Index.aspx?DatasetCode=PNNI_NEW)

**Concept definitions:** Pensions funds (autonomous): "The pool of assets forming an independent legal entity that are bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The plan/fund members have a legal or beneficial right or some other contractual claim against the assets of the pension fund. Pension funds take the form of either a special purpose entity with legal personality (such as a trust, foundation, or corporate entity) or a legally separated fund without legal personality managed by a dedicated provider (pension fund management company) or other financial institution on behalf of the plan/fund members." (OECD)

Table 20. Net FDI positions with offshore centres, mil. EUR, 2008–17

country ↓ year →	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bulgaria			-1,367.1	-1,791.0	-1,882.8	-1,986.8	-1,760.3	-2,123.6	-1,933.8	-1,881.3
Croatia							-119.4	-215.8	-281.5	-233.3
Czechia	-516.3	-400.1	-343.7	-446.5	-26.0	3.2	-18.3	-134.4	-359.1	-232.2
Estonia	-238.0	-250.2	-282.7	-352.8	-428.6	-617.4	-763.2	-742.5	-913.1	-848.2
Hungary	-35,305.6	-42,330.3	-32,790.9	-27,482.0	-26,609.1	-9,979.9	-11,248.6	-5,528.0	-17,485.6	-16,015.1
Latvia	-172.0	-234.0	-167.0	-154.0	-116.0	-160.0	-197.0	-237.0	-220.0	-189.0
Lithuania	-124.4	-219.3	-268.0	-237.5	-205.7	-181.3	-136.7	-154.2	-434.4	-384.4
Poland	-321.2	-357.4	-3,676.0	-3,188.6	-3,318.9	-232.5	-365.1	-517.4	-205.4	-185.5
Romania	0.0	0.0	0.0	0.0	0.0	-779.7	-680.8	-1,046.9	-1,138.8	
Slovakia						-123.4	-57.6	331.8	811.2	1,072.6
Slovenia	71.0	86.0	140.0	144.0	114.0	106.4	88.7	95.6	-23.2	-58.0

**Data source:** Eurostat. Financial account, direct investment – net positions at the end of the year with offshore financial centres, mil. EUR. Last updated 24 Oct 2018, extracted on 18 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop\\_iip6\\_q&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop_iip6_q&lang=en)

**Concept definition:** “The Financial account covers all transactions associated with changes of ownership in the foreign financial assets and liabilities of an economy. The financial account is broken down into five basic functional categories: Direct investment (divided by instrument into equity and investment fund shares, reinvestment of earnings and debt instruments), Portfolio investment (divided by instrument into equity and investment fund shares, reinvestment of earnings for investment fund shares and debt securities), Financial derivatives and employee stock options, Other investment (divided by instrument into other equity, currency and deposits, loans, insurance, pension schemes and other standardised guarantee schemes, trade credits and advances, other accounts receivable/payable and special drawing rights) and Official reserve assets (divided by instrument into monetary gold, special drawing rights, reserve position in the International Monetary Fund and other reserve assets).” (Eurostat)

Table 21.1. Total general government holdings of financial assets as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	163.5	115.5	88.2	79.1	69.4	59.8	53.3	45.4	45	41	37.7	32.7	28.2	25.9	28.8	27.1	32.3	29.1	35.5	33.1	<b>53.5</b>
<b>Croatia</b>					58.3	54.3	52.7	51.3	53.3	56.1	49.4	47.5	51.6	53.4	53.5	57.8	60.8	61.6	61	57.8	<b>55</b>
<b>Czechia</b>	53.8	52.4	49.8	52.8	45.3	40.8	44.2	45.7	46.1	48.7	42.2	41.8	37.6	40.1	42.4	40.6	36.5	34.5	32.8	34.1	<b>43.1</b>
<b>Estonia</b>	63.7	58.1	43.2	42.2	42.8	44.5	47.4	48.3	48.5	45.4	38.7	38.1	44.8	46.1	50.3	49.8	48.3	57.7	55.5	55.7	<b>48.5</b>
<b>Hungary</b>	42.2	40	34.5	33.4	29.2	28.4	27.1	26.2	22.3	21.5	27.6	27.2	26.6	34.6	30.3	28.8	31.8	35.3	36.1	34	<b>30.9</b>
<b>Latvia</b>	26.6	25.2	25.3	30.1	31	29.2	27.9	24.9	24.4	23.6	30.3	32.6	34.2	33.7	37.7	32.8	34.8	27.3	32	32.1	<b>29.8</b>
<b>Lithuania</b>	63.1	58.7	54.5	46.8	41	41.3	40.1	39.5	40	37.9	29	29.8	31.4	25.9	27.8	24.4	29.4	31.7	31.2	33.2	<b>37.8</b>
<b>Poland</b>	47.5	39.8	34.9	27	31.6	31.9	34.8	35.5	37.3	40.1	42.7	40.2	37.4	34	31.7	28.9	29.4	29.1	30.9	30	<b>34.7</b>
<b>Romania</b>	136.2	119	121.4	97.3	81.8	67.5	56.8	46.3	32.6	37.5	44.6	41.6	31.5	28.6	31	29.5	30.4	29.2	29.2	27.2	<b>56</b>
<b>Slovakia</b>	51.2	58.2	50.9	52.1	54.8	52.7	46.7	32.4	25.1	24.9	21.3	20.5	19.9	17.9	28.7	29.6	26	25.9	24.7	24.1	<b>34.4</b>
<b>Slovenia</b>							49.7	46.4	48.1	52.6	39.6	45.2	46.3	47.2	50.8	63.9	77.1	78.5	70.4	64.6	<b>55.7</b>
<b>ECE-11 avg.</b>	<b>72</b>	<b>63</b>	<b>55.9</b>	<b>51.2</b>	<b>48.5</b>	<b>45</b>	<b>43.7</b>	<b>40.2</b>	<b>38.4</b>	<b>39</b>	<b>36.6</b>	<b>36.1</b>	<b>35.4</b>	<b>35.2</b>	<b>37.5</b>	<b>37.6</b>	<b>39.7</b>	<b>40</b>	<b>39.9</b>	<b>38.7</b>	<b>43.7</b>
<b>EU-15 avg.</b>		<b>32.8</b>	<b>31.8</b>	<b>29.8</b>	<b>28</b>	<b>28.2</b>	<b>28.7</b>	<b>30.7</b>	<b>31.6</b>	<b>32</b>	<b>31.8</b>	<b>34.7</b>	<b>38.3</b>	<b>38.7</b>	<b>41.7</b>	<b>41.1</b>	<b>42.1</b>	<b>41.2</b>	<b>40.2</b>	<b>40.2</b>	<b>34.9</b>

**Data source:** Eurostat. Consolidated general government assets – total financial assets, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_ggfa&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_ggfa&lang=en)

**Concept definition:** “The data correspond to quarterly financial accounts for the general government sector and follows the ESA2010 methodology. The data covers financial transactions and balance sheet items for general government (consolidated and non-consolidated) and its subsectors. This includes a number of financial instruments (F.1, F.2, F.3, F.4, ...) as well as some balancing items such as net financial transactions, net financial worth and net financial assets and liabilities. ... In the table gov\_10a\_ggfa, annualised quarterly financial accounts for general government are presented. For financial transactions, data is summed over the four quarters of each year. For the conversion from national currency into euro, the yearly average exchange rate is used. For balance sheet items (stocks), the annualised data corresponds to the data of the fourth quarter.” (Eurostat)

Table 21.2. Government holdings of equity as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	91.4	59.0	41.0	36.7	33.7	28.3	19.9	17.7	14.5	12.4	11.5	11.9	11.8	11.2	10.7	9.0	10.5	10.0	10.0	9.3	<b>23.0</b>
<b>Croatia</b>					37.6	35.7	34.0	32.1	34.4	36.7	26.1	23.4	25.7	28.4	27.9	29.6	31.1	30.6	30.6	29.3	<b>30.8</b>
<b>Czechia</b>	24.4	22.8	21.0	17.7	15.5	12.3	19.5	20.1	22.4	25.1	18.2	18.5	17.7	17.9	16.6	15.4	13.8	12.3	12.6	12.6	<b>17.8</b>
<b>Estonia</b>	43.7	43.8	33.5	30.4	27.1	25.5	24.7	25.4	23.5	21.2	19.0	17.0	24.9	26.4	27.7	28.3	27.3	38.5	36.7	37.4	<b>29.1</b>
<b>Hungary</b>	28.3	22.9	20.3	17.9	18.2	18.8	16.0	15.5	11.5	11.0	11.6	11.5	11.7	17.1	14.3	14.2	14.8	16.1	16.4	16.5	<b>16.2</b>
<b>Latvia</b>	14.1	13.5	14.3	18.0	20.5	18.1	16.3	15.8	13.1	12.7	12.8	12.3	13.6	14.2	18.0	16.9	16.0	14.1	14.2	13.8	<b>15.1</b>
<b>Lithuania</b>	48.7	44.8	39.2	33.1	27.5	28.2	28.6	27.9	25.9	24.4	19.7	18.3	16.4	15.4	15.0	13.8	15.3	16.5	16.6	16.2	<b>24.6</b>
<b>Poland</b>	31.3	22.6	19.2	14.8	16.8	17.4	18.9	20.3	22.1	23.4	26.6	25.5	23.3	20.3	18.1	16.7	16.2	15.7	15.0	14.4	<b>19.9</b>
<b>Romania</b>	50.8	50.4	65.3	55.3	49.1	41.6	32.9	25.5	12.8	18.7	30.0	27.2	18.0	15.2	15.0	12.8	12.2	11.2	10.4	10.3	<b>28.2</b>
<b>Slovakia</b>	12.4	15.1	14.2	14.3	16.6	16.9	14.1	13.7	10.9	9.2	8.1	9.6	9.3	7.5	12.3	12.0	11.4	10.6	9.9	9.1	<b>11.9</b>
<b>Slovenia</b>							31.3	29.3	32.3	36.2	23.1	24.0	27.9	26.6	27.9	32.8	35.7	34.7	33.0	32.9	<b>30.6</b>
<b>ECE-11 avg.</b>	<b>38.3</b>	<b>32.8</b>	<b>29.8</b>	<b>26.5</b>	<b>26.3</b>	<b>24.3</b>	<b>23.3</b>	<b>22.1</b>	<b>20.3</b>	<b>21.0</b>	<b>18.8</b>	<b>18.1</b>	<b>18.2</b>	<b>18.2</b>	<b>18.5</b>	<b>18.3</b>	<b>18.6</b>	<b>19.1</b>	<b>18.7</b>	<b>18.4</b>	<b>22.5</b>
<b>EU-15 avg.</b>		<b>13.8</b>	<b>12.2</b>	<b>11.3</b>	<b>10.0</b>	<b>10.6</b>	<b>11.1</b>	<b>12.4</b>	<b>13.0</b>	<b>13.4</b>	<b>11.9</b>	<b>13.0</b>	<b>14.1</b>	<b>13.9</b>	<b>15.4</b>	<b>15.3</b>	<b>15.7</b>	<b>15.3</b>	<b>14.9</b>	<b>15.0</b>	<b>13.3</b>

**Data source:** Eurostat. Consolidated general government assets – equity, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_ggfa&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_ggfa&lang=en)

**Concept definition:** “The data correspond to quarterly financial accounts for the general government sector and follows the ESA2010 methodology. The data covers financial transactions and balance sheet items for general government (consolidated and non-consolidated) and its subsectors. This includes a number of financial instruments (F.1, F.2, F.3, F.4, ...) as well as some balancing items such as net financial transactions, net financial worth and net financial assets and liabilities. ... In the table gov\_10a\_ggfa, annualised quarterly financial accounts for general government are presented. For financial transactions, data is summed over the four quarters of each year. For the conversion from national currency into euro, the yearly average exchange rate is used. For balance sheet items (stocks), the annualised data corresponds to the data of the fourth quarter.” (Eurostat)

Table 21.3. Government holdings of other accounts receivable as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	10.7	6.7	5.1	5.8	4.1	4.3	8.3	4.5	5.9	6.8	6.7	5.1	4.5	4.7	5.2	7.2	8.3	8.5	8.2	8.5	<b>6.5</b>
<b>Croatia</b>					11.4	8.3	9.3	9.3	9.4	9.5	12.5	12.3	13.2	13.3	13.5	13.6	13.9	14.4	14.4	14.9	<b>12.1</b>
<b>Czechia</b>	12.1	11.1	10.7	11.5	9.9	12	9.7	9.2	9.4	7.9	7.3	8.6	7.9	8.7	9.2	9.1	9.3	9.3	7.2	7.3	<b>9.4</b>
<b>Estonia</b>	10.8	7.7	3.3	3.4	3.5	3.3	5.7	5.1	5.2	5.5	5.1	5.4	5.5	5.8	5.9	5.1	5.2	6.2	5.9	6.2	<b>5.5</b>
<b>Hungary</b>	5.1	5.5	5	4.7	5	4.7	5.2	5	5	4.9	4.8	5.3	5.3	5.2	5.1	6	6.3	7.7	6.3	7.1	<b>5.5</b>
<b>Latvia</b>	4.5	4.5	5	4.3	4.2	4.5	5.2	4.9	6.4	5.3	4.6	4.7	5.1	7.2	6.1	5.1	5.6	5.3	5.8	8.7	<b>5.4</b>
<b>Lithuania</b>	1.5	1.7	1.9	1.8	1.9	1.8	2.1	2.6	2.9	3.8	3.7	3.5	5.2	5.9	5.4	5.4	5.1	6.6	7.3	6.9	<b>3.9</b>
<b>Poland</b>	11.5	12.3	10.5	6.7	9.3	9	9.5	8.2	8.4	8.2	7.8	7.2	7.3	6.9	6.9	6.8	6.8	8	9	9	<b>8.5</b>
<b>Romania</b>	66	56	47.1	34	25.4	19.9	16.4	14.4	12.3	12.3	10.2	8.5	8.3	8.5	9	8.8	9	9.8	8.8	8.2	<b>19.6</b>
<b>Slovakia</b>	4.1	5.5	6.3	12.6	10.9	12	10.4	7.8	5.5	5.3	4	4.2	4.8	5.6	5.3	6	5.7	5.4	4.3	4.4	<b>6.5</b>
<b>Slovenia</b>							10.3	9.9	7.9	7.1	7.2	6.9	6.4	5.9	5.6	5.7	5.7	6.3	6.2	6.4	<b>7</b>
<b>ECE-11 avg.</b>	<b>14</b>	<b>12.3</b>	<b>10.5</b>	<b>9.4</b>	<b>8.6</b>	<b>8</b>	<b>8.4</b>	<b>7.4</b>	<b>7.1</b>	<b>7</b>	<b>6.7</b>	<b>6.5</b>	<b>6.7</b>	<b>7.1</b>	<b>7</b>	<b>7.2</b>	<b>7.4</b>	<b>8</b>	<b>7.6</b>	<b>8</b>	<b>8.2</b>
<b>EU-15 avg.</b>		<b>6.4</b>	<b>6.2</b>	<b>6.3</b>	<b>6.3</b>	<b>6.4</b>	<b>6.2</b>	<b>6.3</b>	<b>6.4</b>	<b>6.3</b>	<b>6</b>	<b>6.3</b>	<b>6.4</b>	<b>6.5</b>	<b>6.8</b>	<b>6.9</b>	<b>7</b>	<b>6.9</b>	<b>6.6</b>	<b>6.6</b>	<b>6.5</b>

**Data source:** Eurostat. Consolidated general government assets – other accounts receivable/payable, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_ggfa&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_ggfa&lang=en)

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Table 21.4. Government holdings of currency and deposits as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	18.9	17.4	15.1	11.2	12.8	14.6	15.8	12.9	16	18.3	17.3	13.7	10.3	8.7	11.6	9.9	11.3	8.9	15	13.3	<b>13.7</b>
<b>Croatia</b>					5.6	6.2	5.4	5.9	5.3	5.3	7	8.5	9.3	7.8	8.2	11.4	10.7	9.1	7.5	7.5	<b>7.5</b>
<b>Czechia</b>	7.4	7.4	6.8	7.7	9.1	8.6	8.6	12.1	10.8	12.2	13.5	11.4	9	10	13.3	12.6	9.8	9.5	9.7	11.7	<b>10.1</b>
<b>Estonia</b>	6.2	5.6	5.1	4	4.7	4	4.8	6	6	4.9	4.6	7	5.5	6.3	7	7.6	7.1	5.2	5.3	6.5	<b>5.7</b>
<b>Hungary</b>	4.1	5.5	4	5.4	2.6	2.5	3.8	3.1	3.6	4.2	9.6	6.9	6.3	7.2	7.1	5.7	6.2	5	6.9	5.9	<b>5.3</b>
<b>Latvia</b>	4.3	3.7	2.4	4.3	3.1	3.1	3.8	2.1	3.6	4.4	6.9	10.2	10.4	7.2	10.2	8	9.2	3.8	7.8	7.2	<b>5.8</b>
<b>Lithuania</b>	8.2	4.4	5.5	6	6.9	7.4	6.2	6.2	9.2	7.9	4	6.4	8.1	4	6.8	4.7	8	8	6.6	9.7	<b>6.7</b>
<b>Poland</b>	3.3	3.7	3.4	3.4	3.6	3.9	4.8	5.4	5.4	7.2	7.2	6.2	5.1	5	5.1	3.7	4.8	3.8	5.1	4.8	<b>4.7</b>
<b>Romania</b>	3.7	2.7	2.1	3.3	2.7	2.6	4.4	4	5.5	4.9	3	4.6	3.9	3.7	5.8	6.6	8.1	7.2	8.9	7.7	<b>4.8</b>
<b>Slovenia</b>							5.7	4.7	5.6	6.4	6.8	12.3	9.6	11.9	11.8	11	16.9	19.8	16.7	15	<b>11</b>
<b>Slovakia</b>	6.2	6.8	6.4	6.5	15.5	15.1	13.3	6.7	5.6	7.4	6.4	4.2	3.6	2.2	6.7	7	3.9	4.7	5.4	5.9	<b>7</b>
<b>ECE-11 avg.</b>	<b>6.9</b>	<b>6.4</b>	<b>5.6</b>	<b>5.8</b>	<b>6.7</b>	<b>6.8</b>	<b>7</b>	<b>6.3</b>	<b>7</b>	<b>7.6</b>	<b>7.8</b>	<b>8.3</b>	<b>7.4</b>	<b>6.7</b>	<b>8.5</b>	<b>8</b>	<b>8.7</b>	<b>7.7</b>	<b>8.6</b>	<b>8.7</b>	<b>7.3</b>
<b>EU-15 avg.</b>		<b>5.3</b>	<b>6</b>	<b>5</b>	<b>4.7</b>	<b>4.6</b>	<b>4.6</b>	<b>4.7</b>	<b>5</b>	<b>5.1</b>	<b>5.7</b>	<b>5.9</b>	<b>5.9</b>	<b>6.3</b>	<b>6.4</b>	<b>6</b>	<b>6.4</b>	<b>6.3</b>	<b>6.3</b>	<b>6.7</b>	<b>5.6</b>

**Data source:** Eurostat. Consolidated general government assets – currency and deposits, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

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Table 21.5. Government holdings of loans as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
<b>Bulgaria</b>	36.6	26.9	21.7	20.8	16.8	11.3	9.2	10.2	8.6	3.5	2.2	1.9	1.5	1.4	1.2	1.1	2.1	1.6	2.2	2	<b>9.1</b>
<b>Croatia</b>					3	3.5	3.4	3.3	3.2	2.9	2.9	2.9	2.8	3	3.2	3.7	4	4.2	4.7	4.8	<b>3.5</b>
<b>Czechia</b>	8.9	10	10	13.8	9.6	6.8	5.3	3.2	2.7	2.4	2.2	2.3	2.6	2.8	2.8	3.2	3.2	3	2.7	2.1	<b>5</b>
<b>Estonia</b>	2.5	1	0.7	0.3	0.2	1.3	2.3	1.8	1.6	1.3	1.1	1.3	1.6	1.9	3.8	4.3	3.9	3.4	3.2	3	<b>2</b>
<b>Hungary</b>	4.4	3.8	2.9	2.6	2.4	2	1.8	2.1	1.9	1.2	1.3	3.1	2.2	1.6	1.3	1.6	2.1	2.9	3.1	3.2	<b>2.4</b>
<b>Latvia</b>	3.8	3.5	3.6	3.5	3.2	3	2.5	2	1.3	1.2	5.8	5.3	4.6	4.4	3.2	2.5	2.8	2.2	1.8	1.6	<b>3.1</b>
<b>Lithuania</b>	4.8	7.8	8	5.9	4.7	3.8	2.9	2.6	2	1.6	1.3	1.1	0.9	0.3	0.3	0.3	0.3	0.4	0.4	0.4	<b>2.5</b>
<b>Poland</b>	0.7	0.8	1.2	1.8	1.7	1.4	1.3	1.2	1	1	0.9	0.9	1	1.2	1	1	1.2	1.1	1.2	1.2	<b>1.1</b>
<b>Romania</b>	15.7	9.8	7	4.7	4.5	3.4	3.1	2.5	2	1.6	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1	1	1	<b>3.3</b>
<b>Slovakia</b>	27.5	29.7	23.3	18.1	11.5	8.4	8.3	3.8	2.9	2.4	2.2	1.9	1.9	2.2	4.2	4.6	4.9	4.8	4.6	4.5	<b>8.6</b>
<b>Slovenia</b>							1.4	1.4	1.3	1.2	1.3	0.8	1.1	1.8	4.6	13.3	17.3	12.8	10.2	8.1	<b>5.5</b>
<b>ECE-11 avg.</b>	<b>11.7</b>	<b>10.4</b>	<b>8.7</b>	<b>7.9</b>	<b>5.8</b>	<b>4.5</b>	<b>3.8</b>	<b>3.1</b>	<b>2.6</b>	<b>1.8</b>	<b>2.1</b>	<b>2.1</b>	<b>2</b>	<b>2</b>	<b>2.4</b>	<b>3.3</b>	<b>3.9</b>	<b>3.4</b>	<b>3.2</b>	<b>2.9</b>	<b>4.4</b>
<b>EU-15 avg.</b>		<b>4.8</b>	<b>4.6</b>	<b>4.6</b>	<b>4.4</b>	<b>4.2</b>	<b>4</b>	<b>4</b>	<b>3.7</b>	<b>3.6</b>	<b>4.2</b>	<b>5</b>	<b>6.2</b>	<b>6.5</b>	<b>7.4</b>	<b>7.6</b>	<b>7.4</b>	<b>7.1</b>	<b>6.7</b>	<b>6.4</b>	<b>5.4</b>

**Data source:** Eurostat. Consolidated general government assets – loans, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_ggfa&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_ggfa&lang=en)

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Table 21.6. Government holdings of debt securities as a share of GDP, 1998–2017

country ↓ year →	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
Bulgaria	5.9	5.3	5.3	4.5	1.8	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2
Czechia	0.9	1	1.2	2	1.2	0.6	0.9	0.8	0.7	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.7
Estonia	0.4	0	0.6	4.1	7	10	9.7	9.6	11.8	12.1	8.6	7.3	7.2	5.6	5.7	4.3	4.8	4.3	4.1	2.4	6
Croatia					0.1	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0
Latvia	0	0	0	0	0	0.5	0	0	0	0	0	0	0.4	0	0	0.3	0.1	0	0.1	0.4	0.1
Lithuania	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0	0	0	0.1	0	0	0	0.1
Hungary	0.2	0	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0.2	0.4	0.6	0.2	0.2	0.1	0.1	0.1
Poland	0.6	0.5	0.6	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.2	0.2	0.3	0.5	0.3
Romania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slovenia							1	0.9	0.9	1.1	0.9	0.8	0.9	0.6	0.6	0.6	0.5	1	0.8	0.7	0.8
Slovakia	0.9	0.9	0.7	0.6	0.3	0.3	0.6	0.4	0.3	0.5	0.5	0.6	0.3	0.3	0.3	0	0.1	0	0	0	0.4
ECE-11 avg.	1	0.9	0.9	1.3	1.1	1.3	1.1	1.1	1.3	1.3	1	0.9	0.9	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.9
EU-15 avg.		1.7	1.9	1.7	1.6	1.5	1.5	1.7	1.8	2	2.5	2.8	3.8	3.7	3.7	3.5	3.5	3.4	3.4	3.2	2.6

**Data source:** Eurostat. Consolidated general government assets – debt securities, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_ggfa&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_ggfa&lang=en)

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Table 21.7. Government holdings of financial derivatives and employee stock options as a share of GDP, 1998–2017

country / year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	avg.
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Croatia					0	0	0	0	0	0	0	0	0	0.5	0.2	-1.1	0.4	2.7	3	0.6	0.4
Czechia	0	0	0	0	0	0	0.1	0.1	0.2	0.3	0.4	0.5	0.1	0.1	0.1	0	0	0	0	0	0.1
Estonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	0	2.2	2.1	2.5	0.8	0.3	0.2	0.3	0.1	0.1	0.3	0.4	1.1	2.2	1.4	0.6	2	3.3	3.2	1.1	1.2
Latvia	0	0	0	0	0	0	0.1	0	0	0	0.1	0	0.1	0.6	0.1	0	1.1	1.8	1.9	0.2	0.3
Lithuania	0	0	0	0	0	0	0	0	0	0	0.1	0.2	0.3	0.3	0.4	0.2	0.6	0.2	0.3	0.1	0.1
Poland	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1
Romania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slovakia	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.4	0.4	0.1	0.1
Slovenia							0	0	0	0	0	0	0	0	0	0	0.4	3.2	2.8	0.7	0.5
ECE-11 avg.	0	0.2	0.2	0.3	0.1	0	0	0	0	0	0.1	0.1	0.2	0.4	0.2	0	0.4	1.1	1.1	0.3	0.2
EU-15 avg.		0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	-0.2	-0.2	0

**Data source:** Eurostat. Consolidated general government assets – financial derivatives and employee stock options, annual, as a share of GDP. Last updated 23 Oct 2018, extracted 23 Nov 2018.

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