



OESTERREICHISCHE NATIONALBANK
EUROSYSTEM

Digging into the composition of government debt in CESEE: a risk evaluation

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Principal Economist

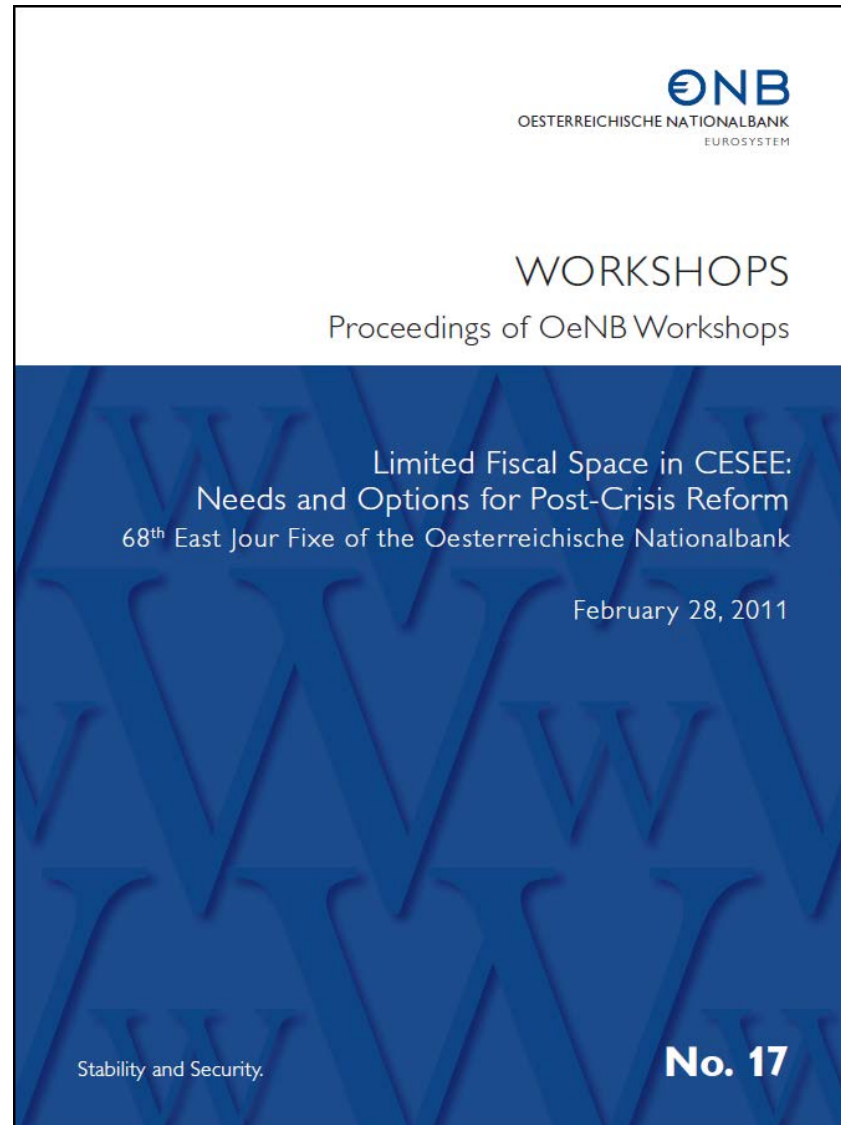
Oesterreichische Nationalbank

Foreign Research Division

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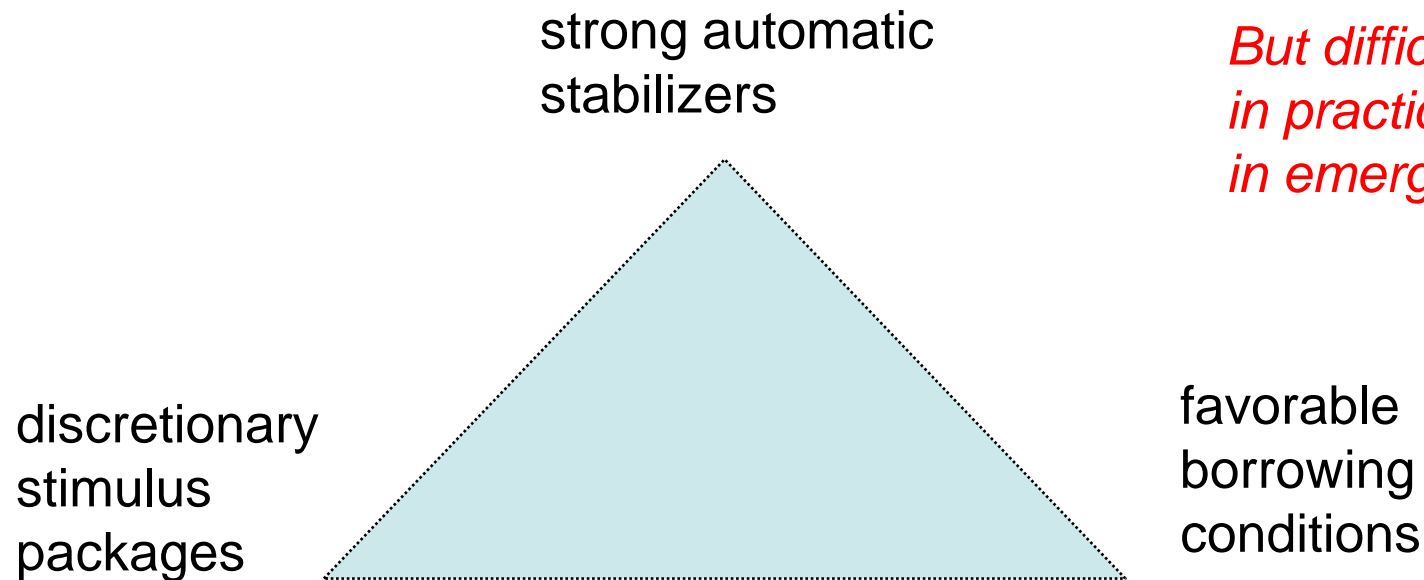


68th OeNB East Jour Fixe: Limited fiscal space in €NB CESEE during the 2008/2009 global financial crisis



Crisis mitigation capacity of fiscal policy

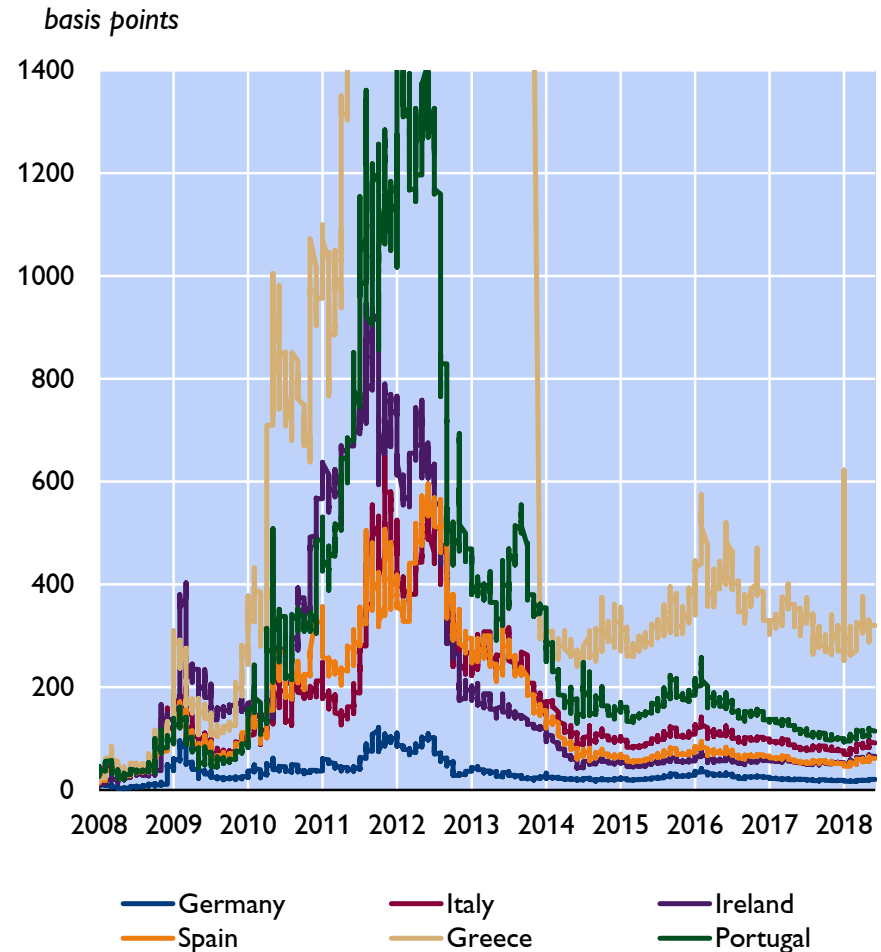
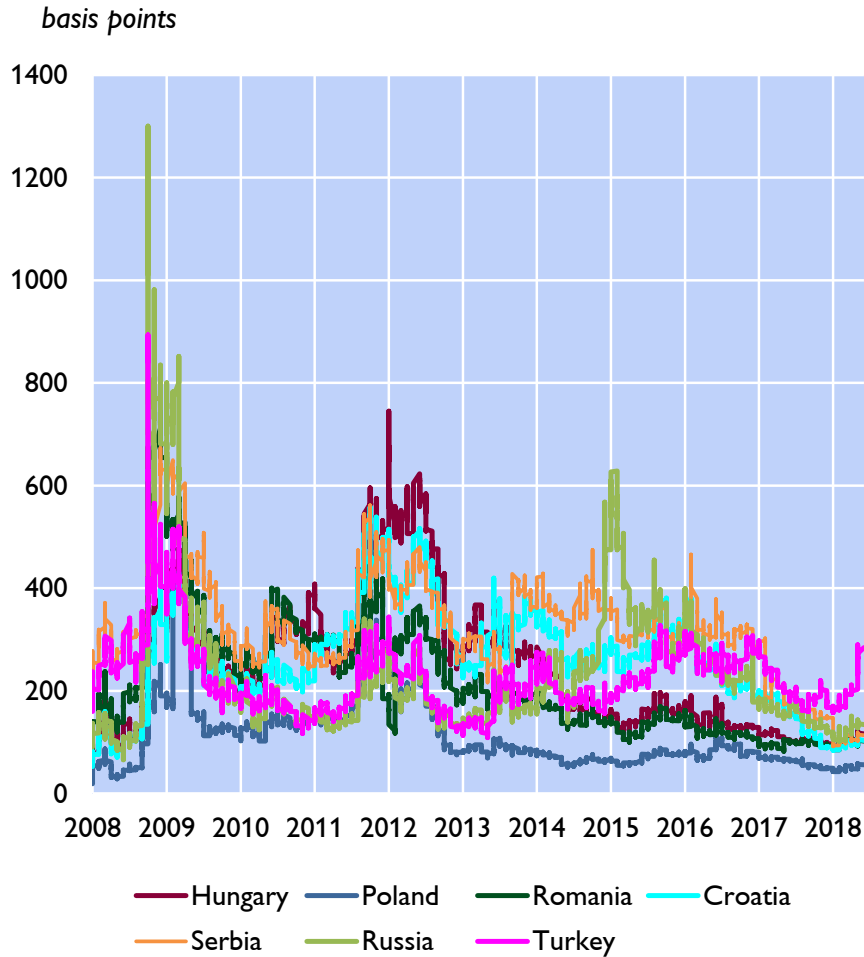
- Recession: Is fiscal policy able to contribute to macroeconomic stabilization?
- Ideally, in order to cushion the downturn, fiscal policymakers would want to rely on:



But difficult to achieve in practice, especially in emerging markets

Sovereign default risk perceptions: CESEE vs. EA countries

Credit default swap premiums for government bonds with 5-year maturity



Source: Macrobond. Note: Latest observation: June 1, 2018.

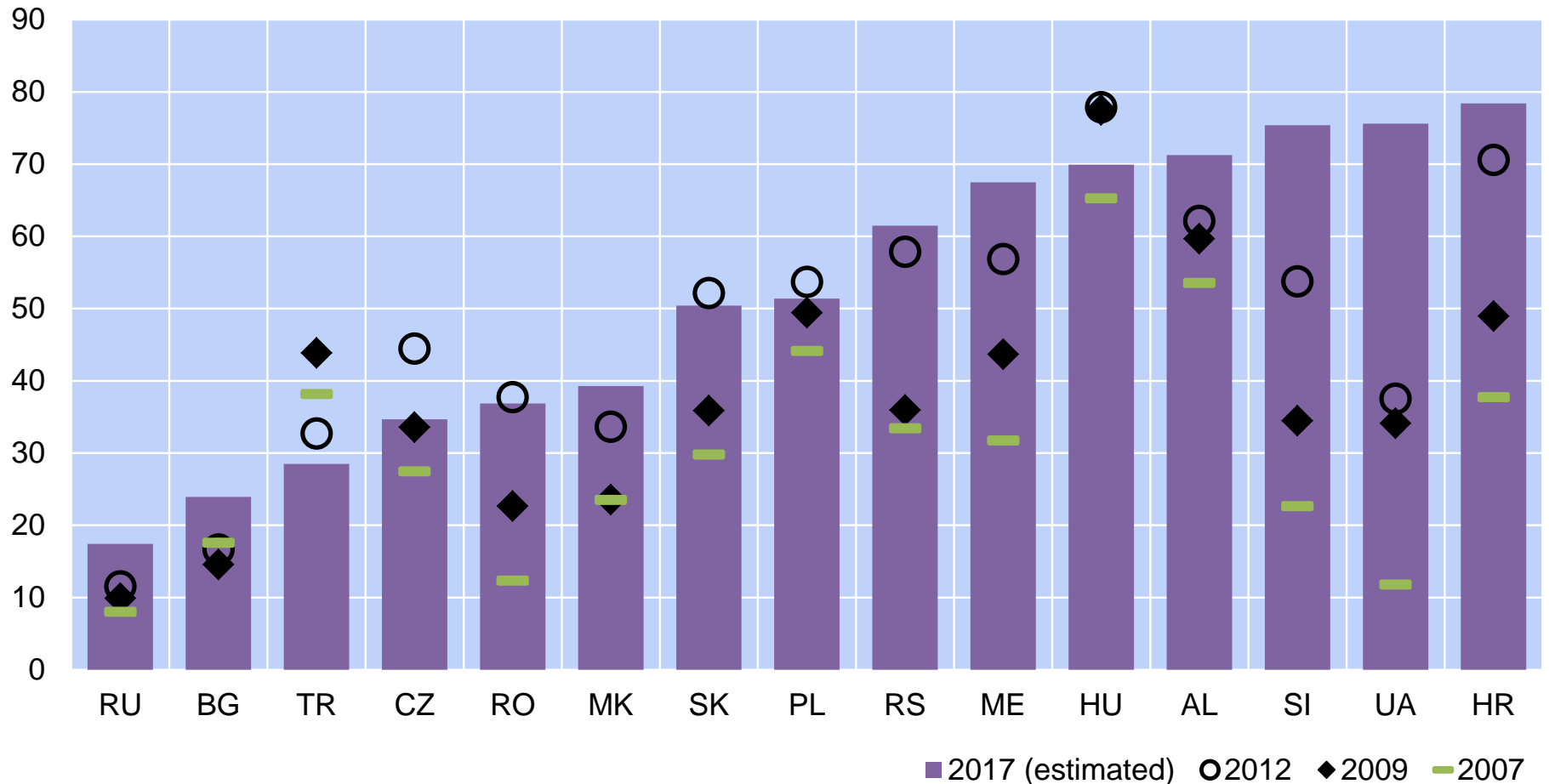
Increased post-GFC focus on public debt management and sovereign balance sheet structures

- **Das et al. (IMF, 2010):** Public debt management (PDM) => financial stability
- **Baldacci et al. (IMF, 2011):** Sudden changes in financial market conditions => sovereign liquidity (*early warning exercises*)
- **Blommestein & Turner (OECD, 2012), Zampolli (BIS, 2012):** PDM <=> monetary policy
- **Kose et al. (World Bank, 2017):** cross-country database of fiscal space
- **Ostry, J. (IMF, 2018):**
 - *Given pending monetary policy normalization, paying down increased post-GFC public debt levels is the issue of the day (@ IMF Spring Meetings, 2018)*
 - *Rating agencies pay now more attention to fiscal space*
 - *PDM as underappreciated channel to boost fiscal space*

Deep recessions following the GFC significantly pushed up government debt ratios in CESEE

General government gross debt

% of GDP



Source: IMF World Economic Outlook, as of April 2018.

Government debt structure & macro-financial risks

Based on:

[Eller, M. and J. Holler. 2018. Digging into the composition of government debt in CESEE: a risk evaluation. In: *Focus on European Economic Integration* Q2/18. Vienna: OeNB. 56–80.](#)

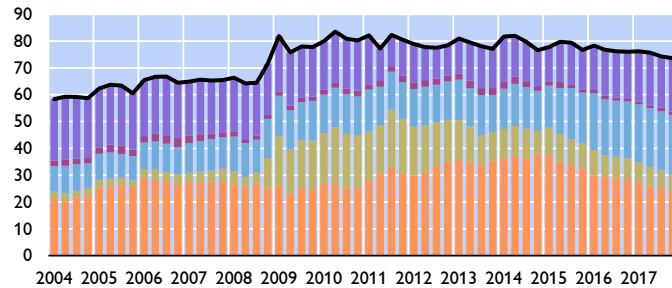
Creditor structure

- **Long-term investors who are less sensitive to current market conditions** reduce liquidity and refinancing risk
 - Typically the case for domestic investors such as pension funds
- **However, comparatively shallow capital market** make it hard to issue sufficient portions of sovereign debt domestically
- **A high share of debt owed to nonresident creditors:**
 - Underlines a country's creditworthiness. As long as sufficiently diversified investor base → lower funding costs in normal times
 - But also: first-round economic consequences of a default have to be borne mainly by foreign investors → drives up country risk premia
 - During periods of high global uncertainty: increasing risk to lose access to market funding (liquidity risk) or at favorable conditions (refinancing risk)
 - More difficult access to international capital markets during downturns: *“When it rains, it pours”* (Kaminsky et al., 2004)

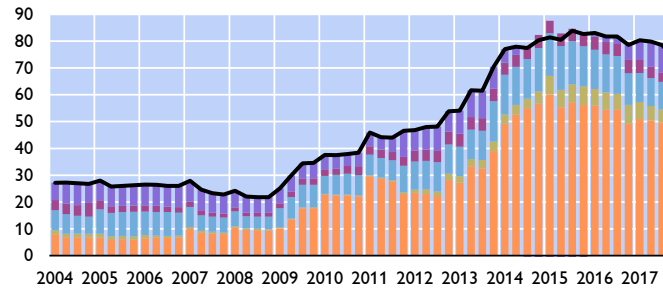
Government debt by creditor (countries with debt ratio > 60%)

General government gross debt by creditor, % of GDP

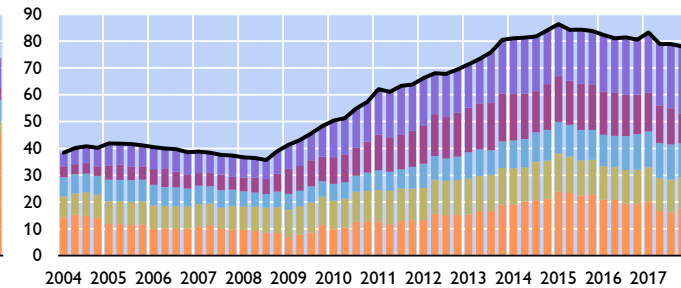
HUNGARY



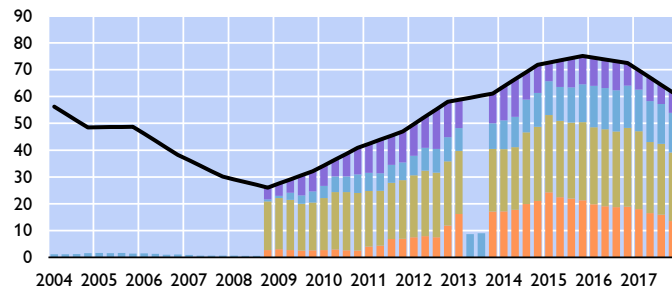
SLOVENIA



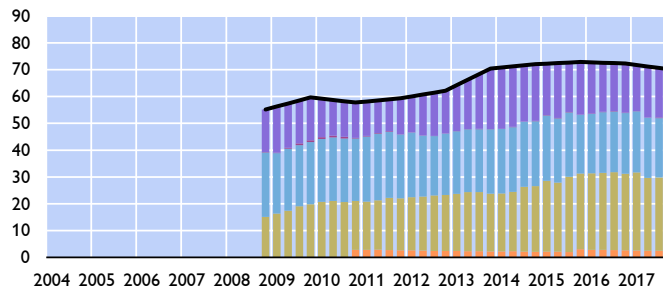
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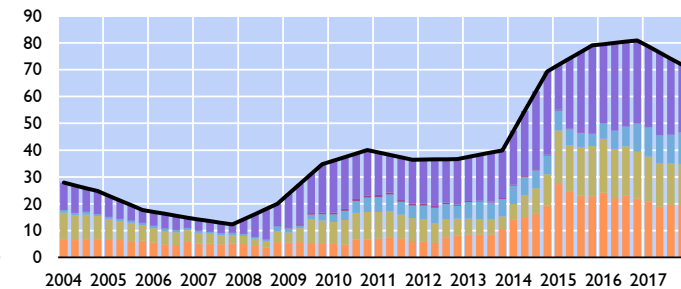
SERBIA



ALBANIA



UKRAINE



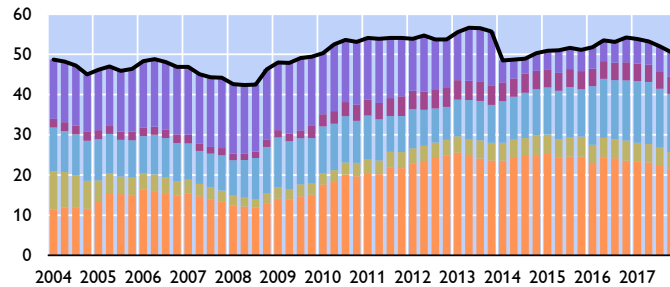
- Loans to government from abroad and other government liabilities vis-à-vis nonresidents
- Government debt securities held by foreign portfolio investors
- Government debt owed to other domestic investors (e.g. NCB, pension funds, investment funds, insurance companies) and statistical discrepancy
- Loans to government from domestic banking sector
- Government debt securities held by domestic banking sector
- General government consolidated gross debt

Source: Eurostat, IMF, national central banks.

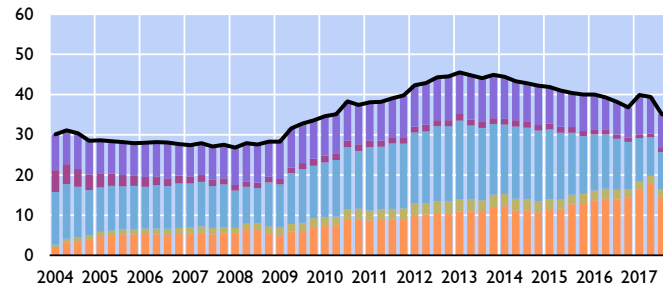
Government debt by creditor (countries with debt ratio < 60%)

General government gross debt by creditor, % of GDP

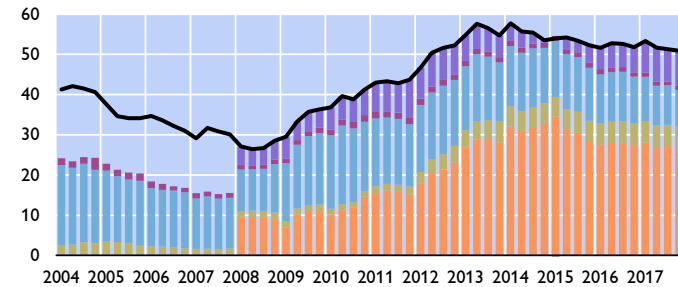
POLAND



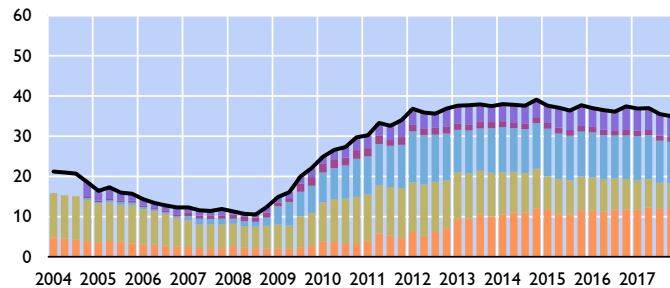
CZECH REPUBLIC



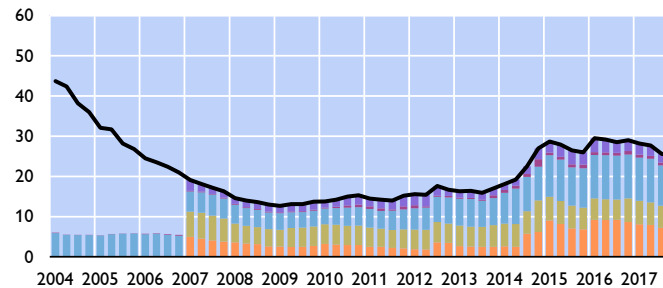
SLOVAKIA



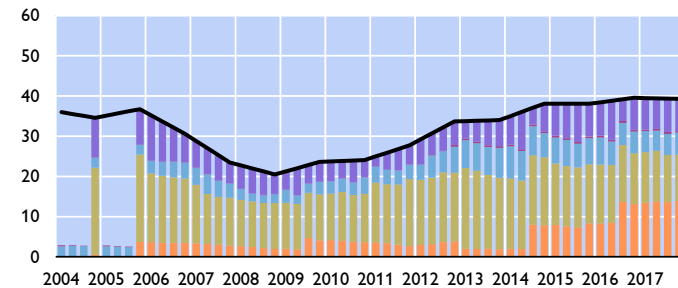
ROMANIA



BULGARIA



FYR MACEDONIA



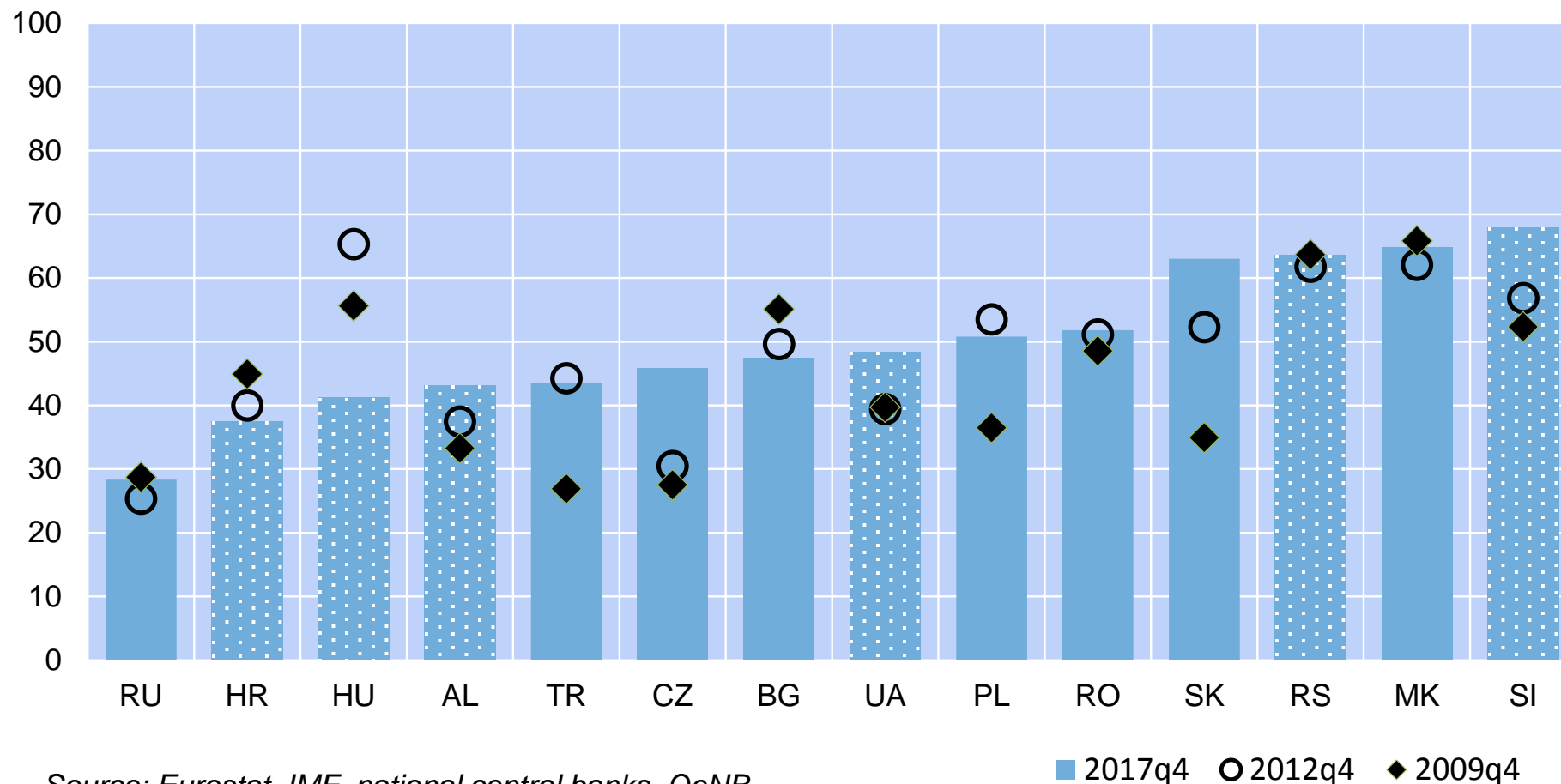
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Source: Eurostat, IMF, national central banks.

Substantial shares of government debt owed to nonresidents, often dominated by portfolio investors

General government gross debt owed to nonresidents

% of total debt



Source: Eurostat, IMF, national central banks, OeNB.

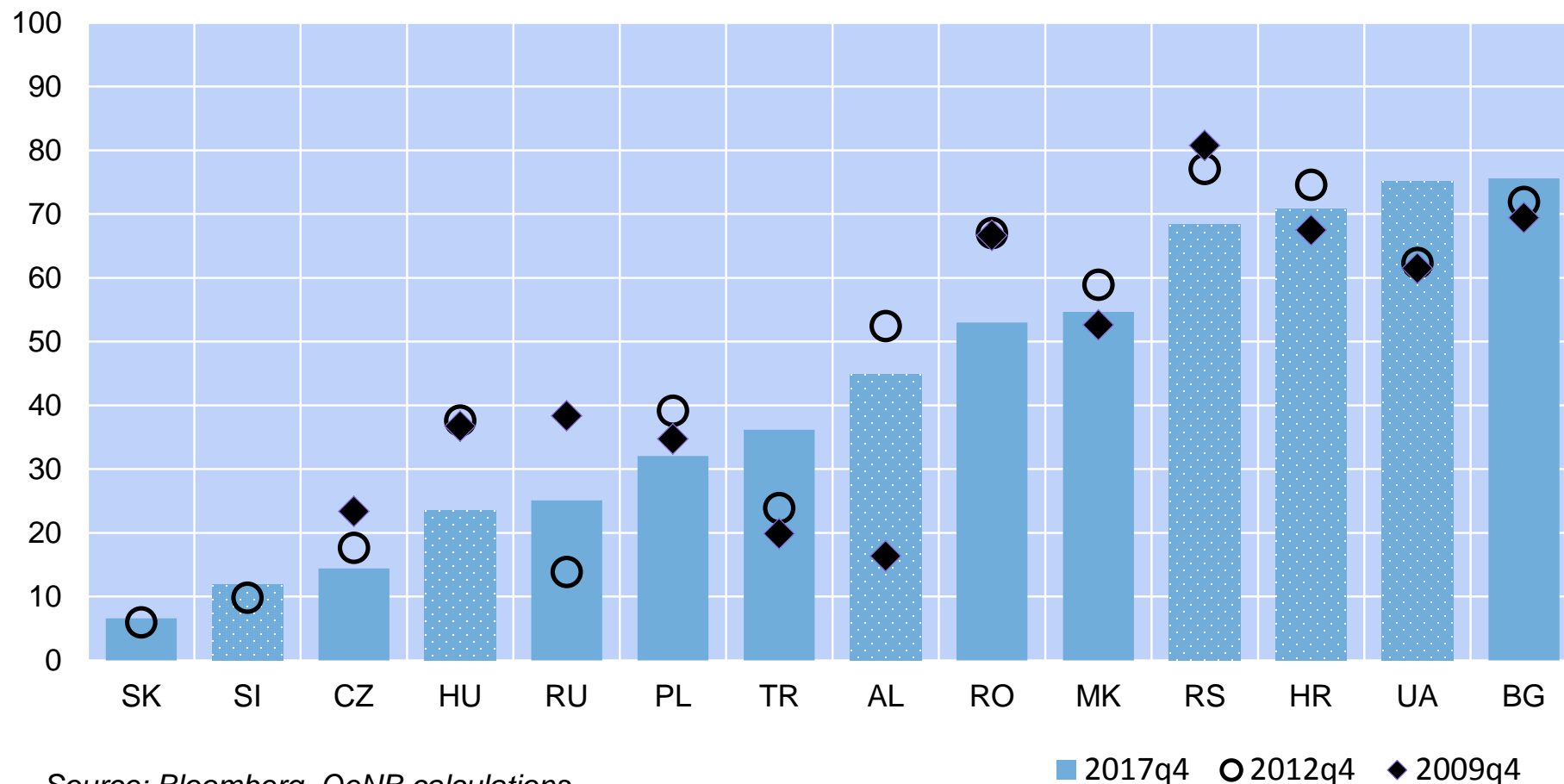
Currency structure

- **Issuing FC-denominated debt to attract foreign investors** who are not willing to add FC risk to their asset portfolio → reduce funding costs by **reducing liquidity premiums and increasing demand**
- **A high share of foreign currency debt:**
 - **Implies substantial exchange rate risk:** might be especially harmful since it implies not only potential **changes in interest payments but also a revaluation of the debt stock**
 - To which extent exchange rate risks **materialize** depends on a variety of factors: overall exchange rate stability, foreign currency debt being denominated in volatile currencies and/or currencies that are only poorly correlated with the issuer's economic cycle, presence of hedging instruments, ...
- However, **foreign investors may also have an important share in domestic currency debt**, which under certain circumstances may result in sudden outflows (e.g. HU in the fall of 2008)

Exchange rate risks in countries with high FC shares and an already large debt stock

Government debt denominated in foreign currency

% of total debt

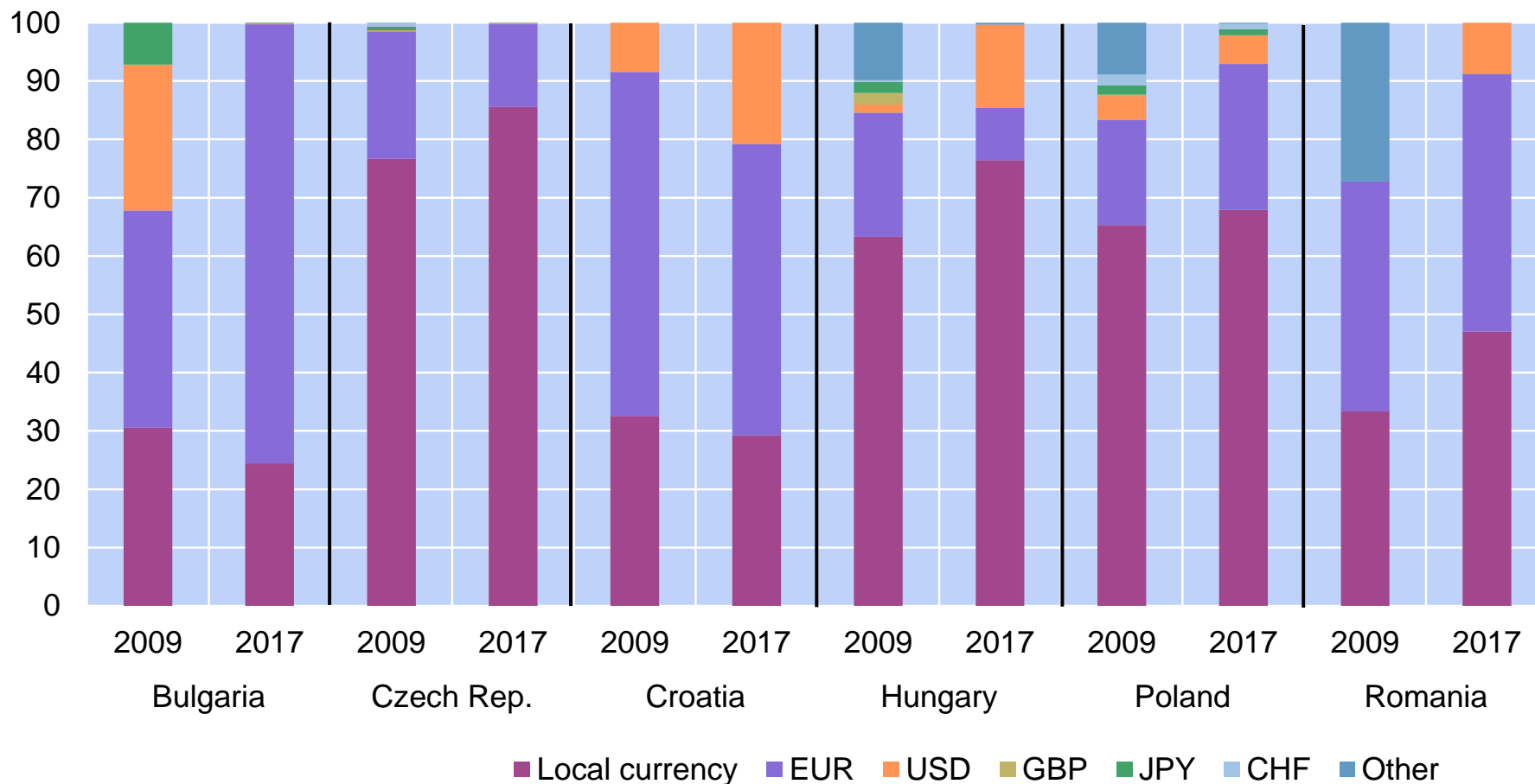


Source: Bloomberg, OeNB calculations

The EUR dominates public FC borrowing in CESEE EU member states

Currency structure of government debt

% of total debt, end-of-year

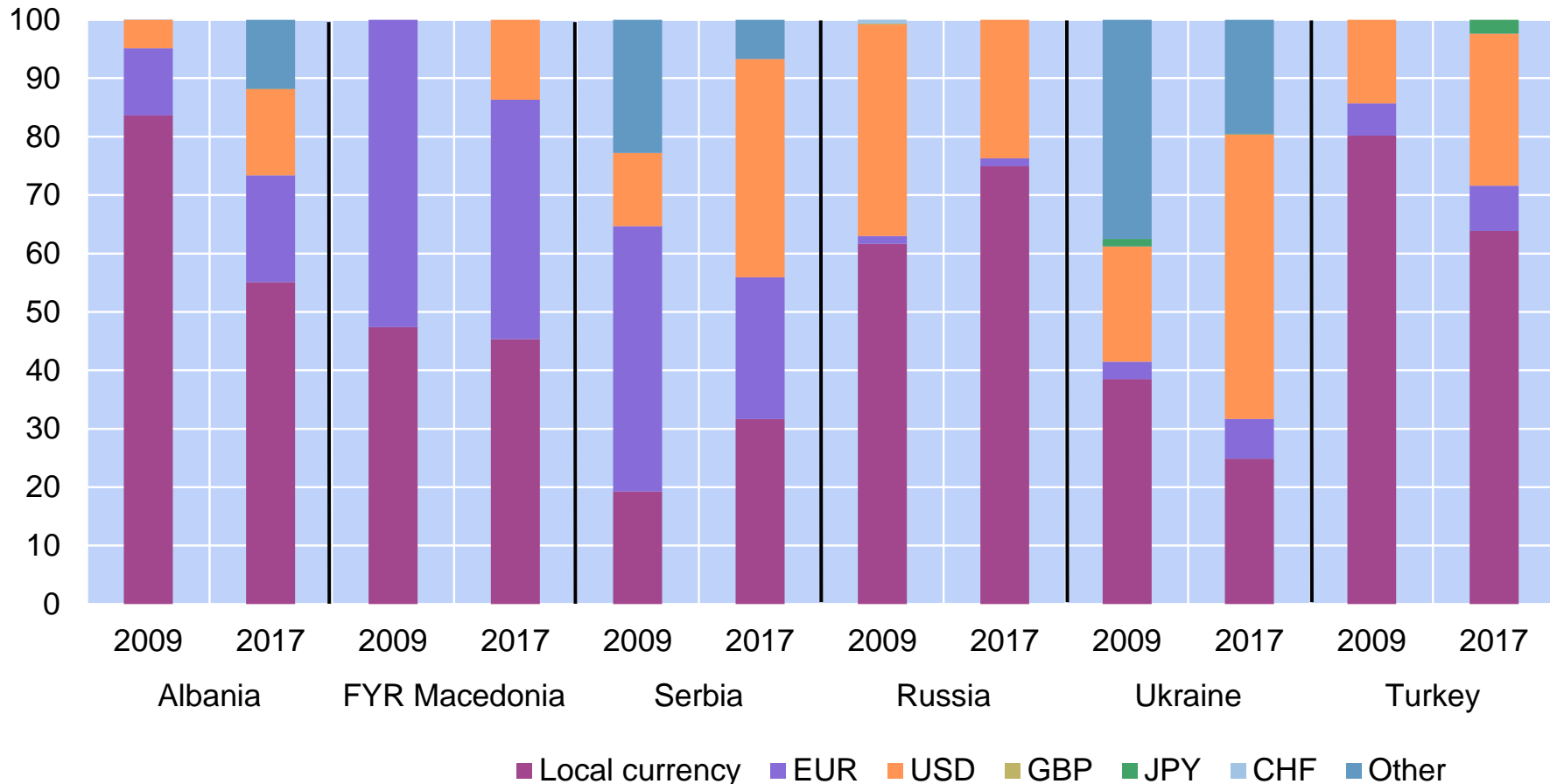


Source: Bloomberg, OeNB calculations.

The USD dominates public FC borrowing in Russia, Serbia, Turkey and Ukraine

Currency structure of government debt

% of total debt, end-of-year



Source: Bloomberg, OeNB calculations.

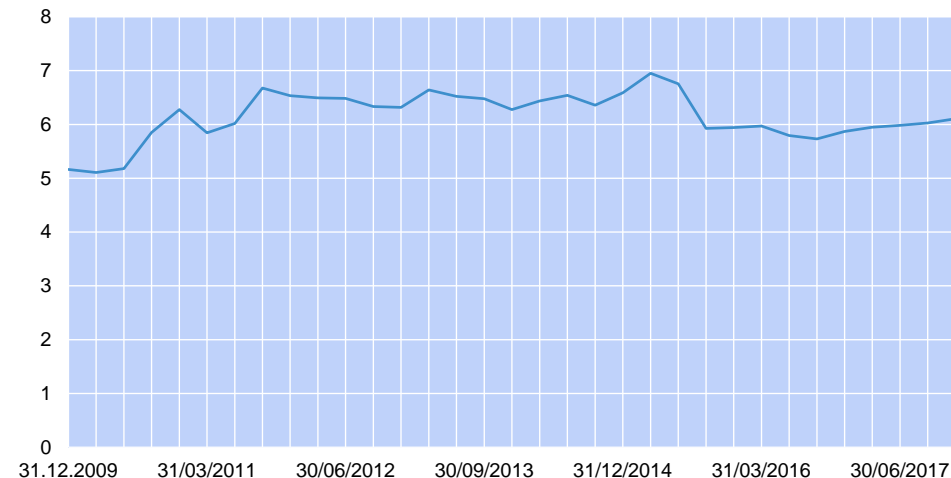
Maturity structure

- **Short-term debt issuance** is usually associated with **lower funding costs**
- **A high share of debt falling due in the short run** (or debt with variable interest rates or short interest rate fixation periods):
 - **Implies interest rate risk**: An interest rate increase translates into a higher debt servicing burden and thus limits fiscal space
 - **Implies also high rollover risk**: i.e. the need to refinance a substantial part of debt under uncertain market conditions

Refinancing risks have been relieved somewhat due to lengthening maturities of debt instruments

Average time to maturity - all instruments

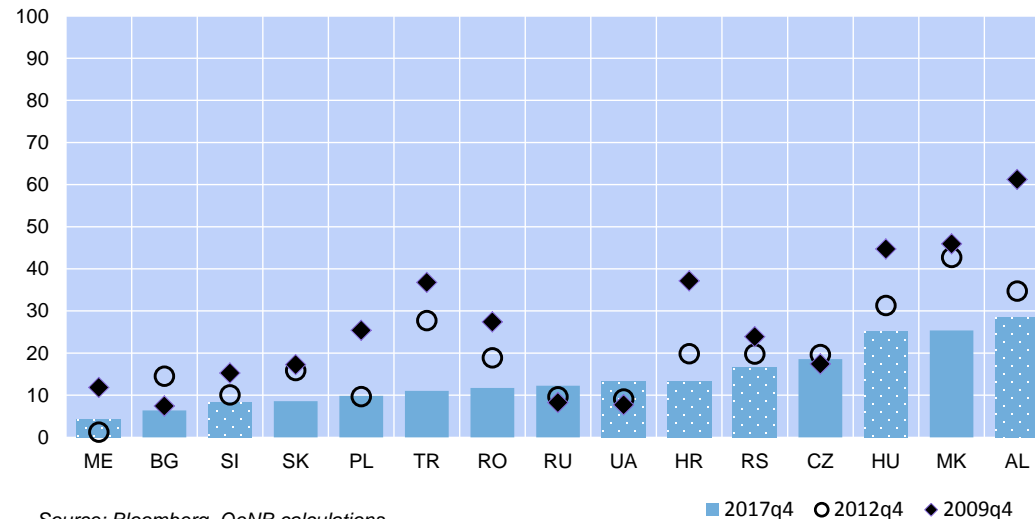
weighted average years to maturity of all principal payments in the debt portfolio, cross CESEE-15 average



Source: Bloomberg.

Outstanding general gov't debt maturing within 1 year, all currencies

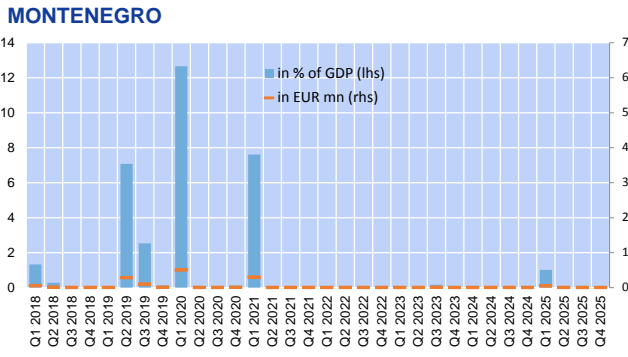
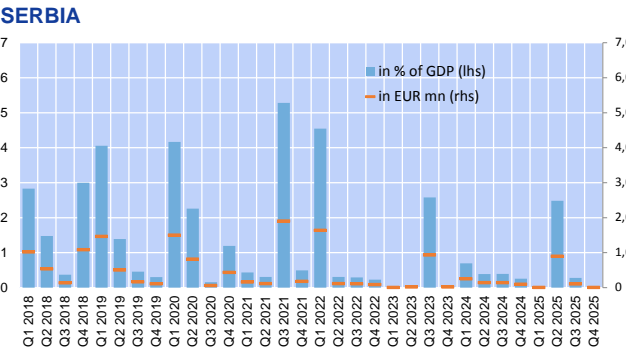
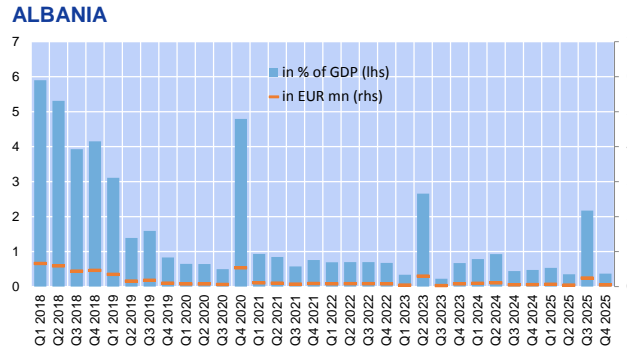
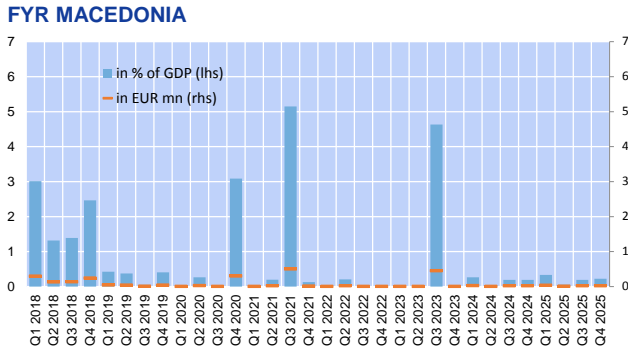
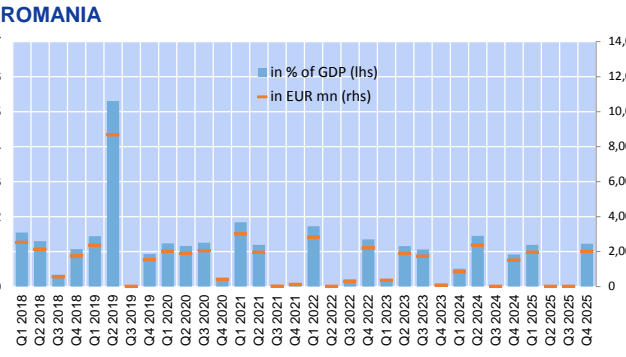
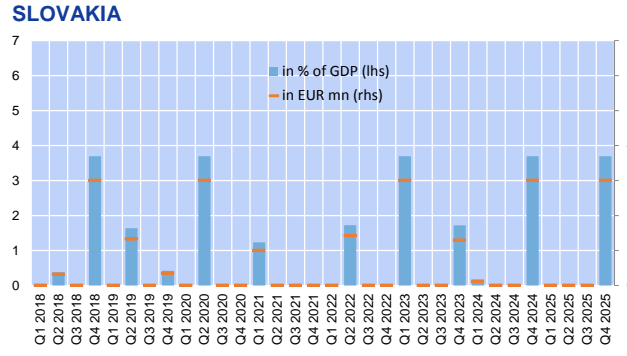
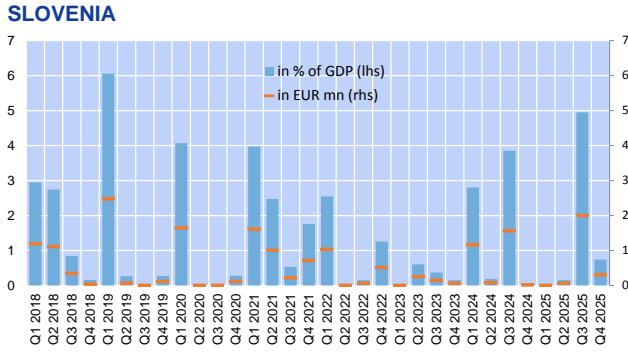
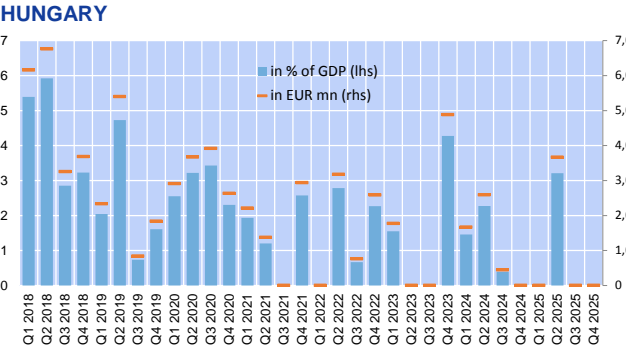
% of total debt



Source: Bloomberg, OeNB calculations

- Residual maturities of the sovereign debt profile have broadly lengthened since the GFC
- Nevertheless, a few countries are still subject to a considerable share of debt falling due in 2018

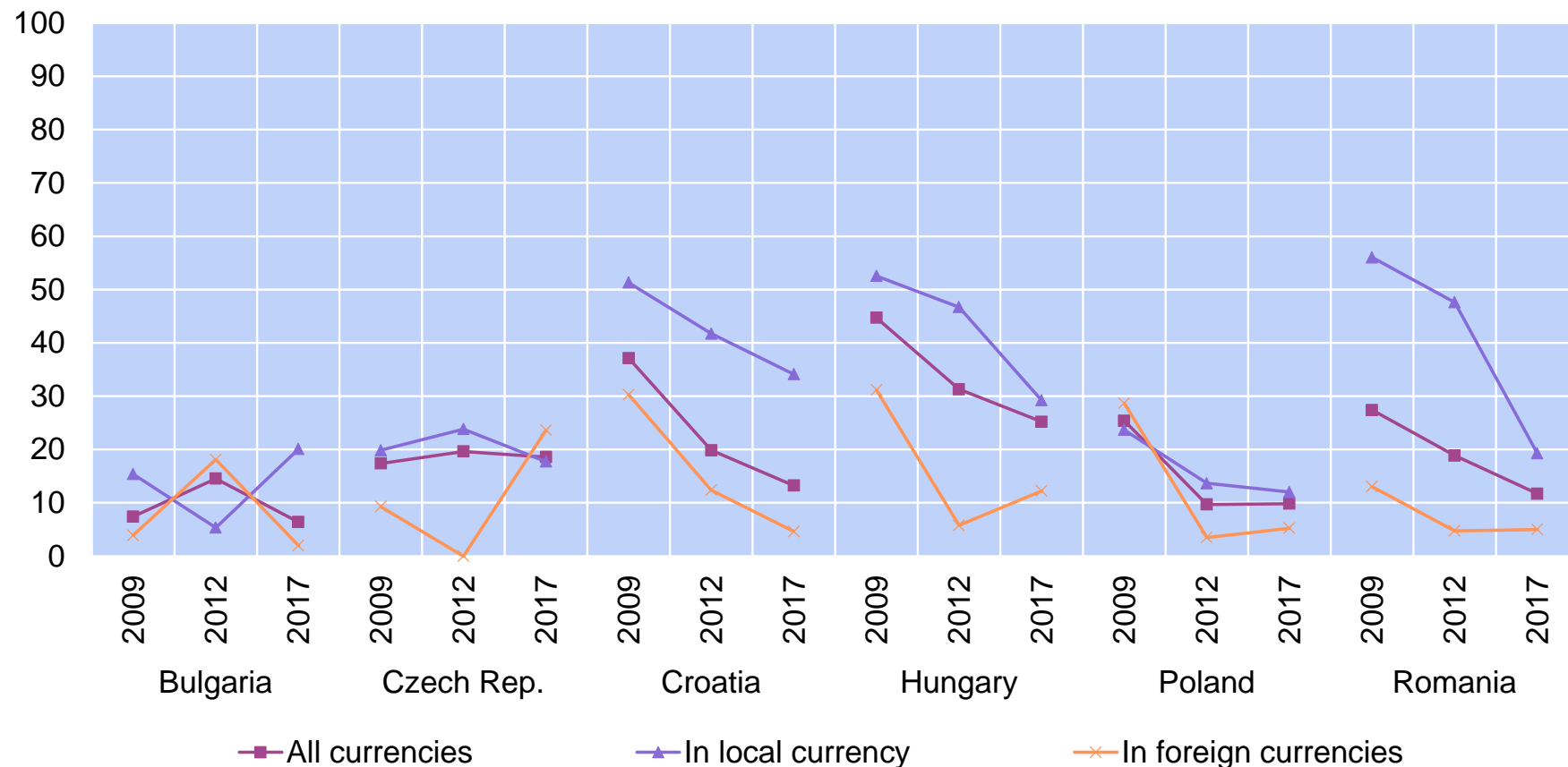
Several countries face concentrated debt redemptions in the next few years



Both LC- and FC-denominated debt experienced a gradual decline in short-term maturities ...

Share of debt maturing within 1 year - by currency

in % of total

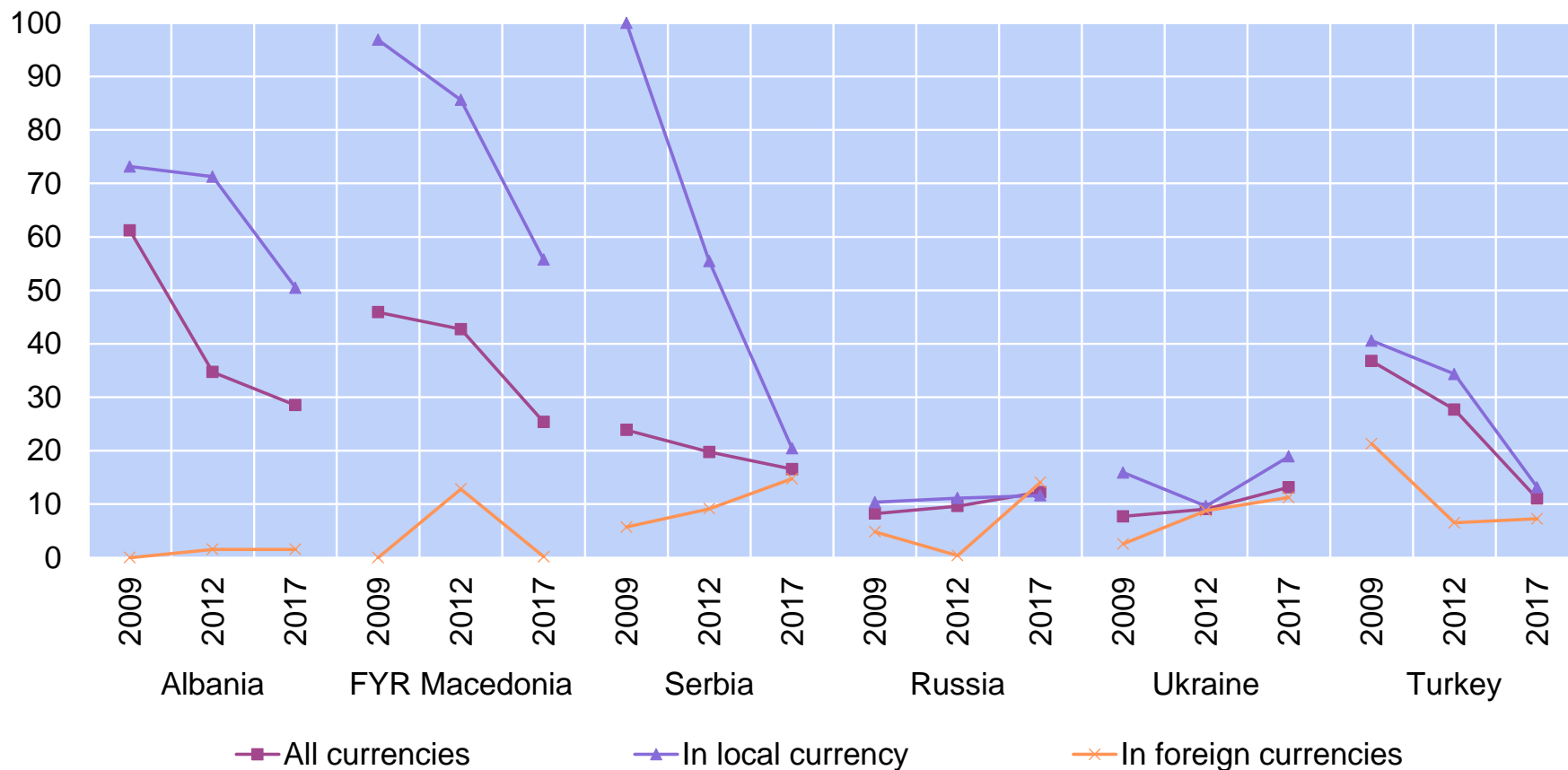


Source: Bloomberg, OeNB calculations.

... & FC debt is across the board less of a short-run nature than the one issued in LC

Share of debt maturing within 1 year - by currency

in % of total

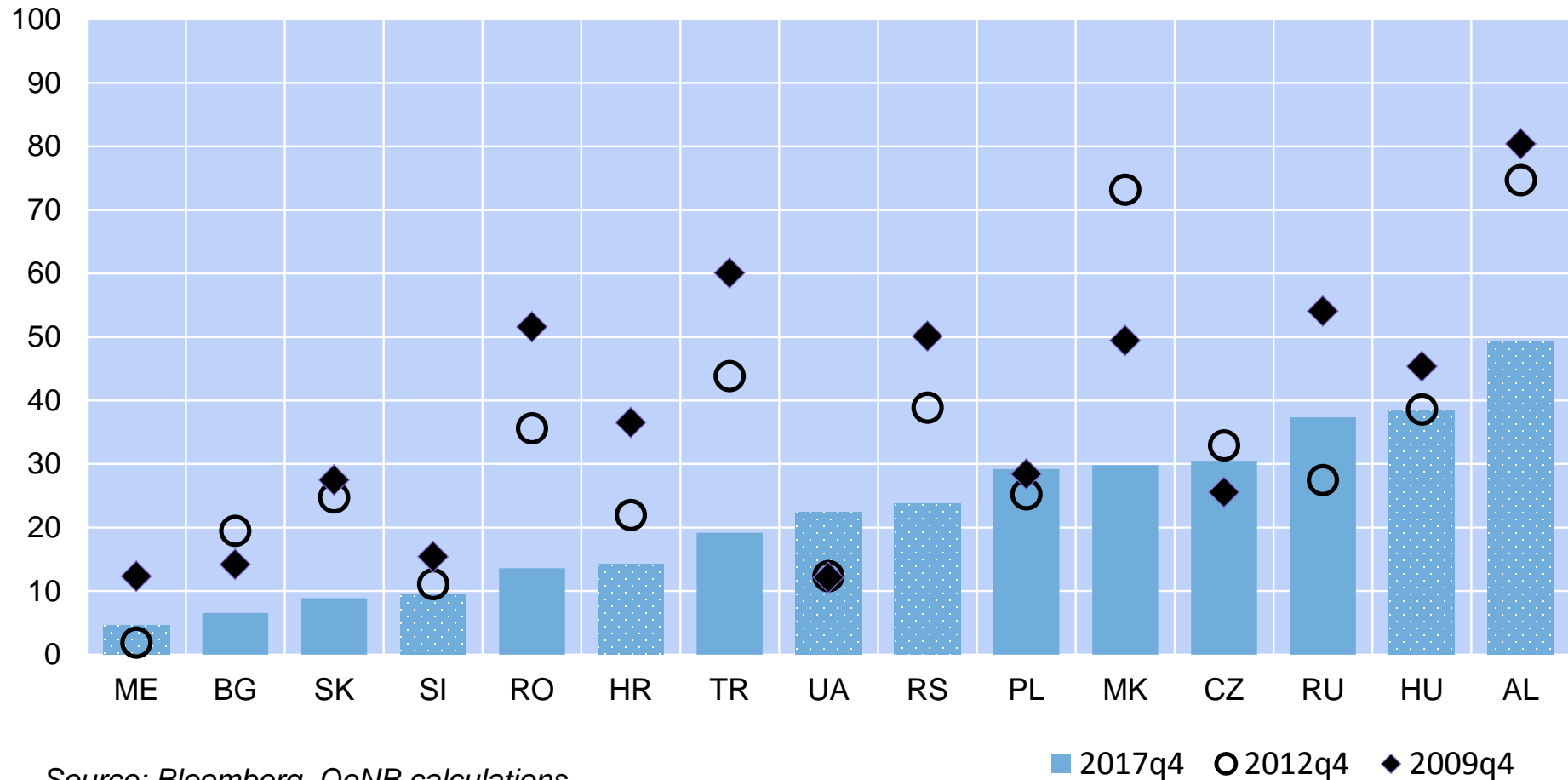


Source: Bloomberg, OeNB calculations.

Lengthened maturities also resulted in a reduced need to re-fix interest rates in the short run

Government bonds with interest rates to be refixed within 1 year

% of total government bonds



Source: Bloomberg, OeNB calculations

Government debt structure & risk implications (1)

- Several CESEE countries show **vulnerabilities to refinancing risk and market risk**
- Strong increase of debt ratios following the GFC & **increased shares of government debt owed to foreign portfolio investors** → **accentuated refinancing risk**
- At the same time, **residual maturities** of the sovereign debt profile **have broadly lengthened** → **alleviated refinancing risk**
 - Only a few countries are subject to a considerable share of debt falling due in 2018: AL, HU, MK
 - ... and/or meaningful short-run repayments in FX: CZ, HU, RU, RS, UA
 - Still, **redemption profiles** of several countries **show pronounced repayment spikes**, indicating potential liquidity constraints in the case of future macro-financial stress

Government debt structure & risk implications (2)

- As regards **exchange rate risk**, several CESEE countries have been able to **keep constant or to reduce the share of FX-denominated public debt since the GFC**
- However, a large share of FX-denominated public debt – in combination with an already large debt stock – reveals **serious exposure to exchange rate risks in a few countries**: HR, RS, UA
- Finally, **interest rate risks have been relieved somewhat** due to **lengthening maturities** and the resulting **reduction in the need to re-fix** interest rates in the short run
- But there are still **a few countries with sizable portions** of government bonds **subject to a short-run realignment of interest rates**: AL, CZ, HU, MK, PL, RU

How to improve the government debt structure?

- Strengthen public borrowing at home and in local currency via **fostering the development of capital markets** in the region (e.g. EBRD initiative)
- Avoid excessive unhedged positions of foreign currency debt: **develop derivative markets** to hedge exchange rate risk
- **Link coupon payments to certain benchmarks** to avoid procyclicality: e.g. inflation- or GDP-linked government bonds (especially in countries with limited fiscal space)