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**Research Report**

## Financial stability assessment for EU candidate countries and potential candidates: Developments since 2016

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EUROPEAN CENTRAL BANK

EUROSYSTEM

## Occasional Paper Series

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# Financial stability assessment for EU candidate countries and potential candidates

Developments since 2016

No 233/ September 2019

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# Abstract

This paper reviews and assesses financial stability challenges in countries preparing for EU membership, i.e. Albania, Bosnia and Herzegovina, Kosovo<sup>1</sup>, Montenegro, North Macedonia, Serbia and Turkey. The paper mainly focuses on the period since 2016 (unless the analysis requires a longer time span) and on the banking sectors that dominate financial systems in this group of countries. For the Western Balkans, the paper analyses recent trends in financial intermediation, as well as the two main challenges that have been identified in the past.<sup>2</sup> Asset quality continues to improve, but the share of non-performing loans is still high in some countries, while regulatory, legal and tax impediments are still to be resolved in most cases. High unofficial euroisation is a source of indirect credit risk for countries with their own national legal tender, which calls for continued efforts to promote the use of domestic currencies in the financial system. At the same time, banking systems seem less prone to financial stress from maturity mismatches than certain EU peers. These risks are met with a solid shock-absorbing capacity in the Western Balkans, as exemplified by robust capital and liquidity buffers. Turkey experienced a period of heightened financial stress during 2018 and, while its banking system appears to have sufficient buffers to absorb shocks overall, significant forex borrowing of corporates and high rollover needs of banks in foreign exchange on the wholesale market constitute considerable financial stability risks.

**JEL codes:** F31, F34, F36, G15, G21, G28

**Keywords:** Banking sector, financial stability, foreign exchange lending, credit growth, non-performing loans, EU accession, Western Balkans, Turkey.

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<sup>1</sup> This designation is without prejudice to positions on status and is in line with UNSCR 1244 and with the ICJ Opinion on the Kosovo Declaration of Independence.

<sup>2</sup> See, for example, Gächter et al. (2017), “[Financial stability assessment in EU candidate and potential candidate countries](#)”, *Occasional Paper Series*, No 190, ECB, Frankfurt am Main, May.

## List of country groups

**EU (P)C:** EU candidate countries and potential candidates (including the Western Balkans as defined below and Turkey)

**Western Balkans:** Albania, Bosnia and Herzegovina, Kosovo (this designation is without prejudice to positions on status and is in line with UNSCR 1244 and with the International Court of Justice (ICJ) Opinion on the Kosovo Declaration of Independence), Montenegro, North Macedonia and Serbia

**EA4:** France, Germany, Italy and Spain

**EU6:** Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania

**EU11:** Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia and the Slovak Republic

# Executive summary

**Banks dominate the financial sectors of EU candidate countries and potential candidates and the majority of these banks in the Western Balkans are owned by foreign banks.** These are mainly EU-headquartered banks, which have, however, been losing market share to other foreign banks since 2014. Several factors have contributed to this trend, namely the deleveraging and withdrawal of some EU parent banks, mergers and acquisitions, and privatisation. The non-bank financial sector is generally very small in EU (potential) candidates. A more comprehensive assessment, including private sector debt or real estate markets, would require the availability of consistent data. Therefore, efforts to improve the coverage and quality of available data are crucial to broadening future analysis.

**Private sector credit growth accelerated in most countries over the last two years, supported by favourable economic conditions and structural reforms.** Except in Albania, credit growth strengthened in the region and was mostly driven by lending to households. This was supported by favourable macroeconomic conditions, a low interest rate environment, reforms to improve the business environment, and parent bank deleveraging coming to an end. According to survey information, demand for loans increased significantly, while supply conditions improved to a lesser extent. This may suggest that newly extended credit may be of better quality than in previous credit cycles.

**Banking systems are well capitalised and liquid, but challenges regarding asset quality and indirect credit risk remain.** The share of non-performing loans in total loans declined in all countries, and provisioning also improved in general. Nevertheless, the non-performing loans ratio (NPL ratio) is still relatively high in some countries and, despite several measures taken by national authorities, regulatory, legal and tax impediments remain an obstacle to further progress in unwinding non-performing loans (NPLs) in many cases. High unofficial euroisation constitutes a tail risk for financial stability for countries with their own legal tender as, in the case of sharp currency depreciation, lending to unhedged borrowers exposes banks to indirect credit risk. Relative to non-euro area EU countries, the share of foreign exchange-linked assets and liabilities is higher in the Western Balkans, with a particularly pronounced difference for household deposits. Therefore, continued efforts by authorities to improve asset quality and promote the use of domestic currencies in the financial system are encouraged.

**Compared with certain EU countries, banking systems in EU candidate countries and potential candidates seem less prone to financial stress from maturity mismatches, but related risks should be closely monitored.** While maturity mismatches are less pronounced in the region than in selected EU countries, the funding of long-term lending via long-term deposits has declined in recent years. In addition, maturity mismatches appear most problematic in foreign currencies, where the central bank cannot fully act as a lender of last resort. This strengthens the case for promoting the use of domestic currencies.

**Turkey has experienced periods of heightened financial stress recently, with strong currency depreciation, falling equity prices and increasing yields.** This follows economic overheating, which was partly due to buoyant credit growth supported by policy stimuli and the expansion of the credit guarantee fund. While the banking system in Turkey appears to have buffers to absorb shocks, there are considerable financial stability risks owing to significant forex borrowing in the corporate sector, rising credit risk and high rollover needs of banks in the wholesale market.



# 1 Introduction

**The financial systems of EU candidate countries and potential candidates continue to be dominated by banks, which in the Western Balkans are mostly foreign owned.** Banks in EU candidate countries and potential candidates hold 83-98% of financial sector assets, except for Kosovo<sup>3</sup>, and only 23% of assets are held by domestically-owned banks. According to the European Investment Bank (EIB), regional financial systems do not offer a substantial variety of financial products, which limits the choice of financial instruments.<sup>4</sup> In general, there is little capital market activity, the penetration of insurance products is negligible and non-bank financial institutions are insignificant. Therefore, in this paper we focus on the banking sector (focusing mainly on credit risk, funding and liquidity, profitability and solvency, and the structure of the banking system).<sup>5</sup> A more comprehensive assessment, including private sector debt or real estate markets, would require the availability of consistent data. Therefore, efforts to improve the coverage and quality of available data are crucial to broadening future analysis.

**This paper is structured as follows:** Sections 1-5 focus on the Western Balkans (briefly reviewing selected financial stability topics that are deemed relevant, such as past structural changes, credit developments and developments relating to the two main risks identified in the past). In Section 6, Turkey is analysed separately given the recent financial turmoil and its different structural features and economic cycle. A special feature looks at maturity mismatches in more detail (Section 7), including at the level of sectors and currency of denomination. Section 8 is a data appendix, while Section 9 includes short Western Balkan country annexes.

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<sup>3</sup> In Kosovo, the respective share is 65%, which is due to the inclusion of the public pension fund in the financial system. Kosovo's public pension system is managed by an independent public institution, not as a pay-as-you-go scheme, but by investing assets of a defined contribution pension system. For this reason, it is reported as part of the financial sector, not the fiscal sector.

<sup>4</sup> European Investment Bank (2018), "Access to Finance in the EU Neighbourhood and Enlargement Countries", October.

<sup>5</sup> The overall macroeconomic situation is important in assessing these risks, but this is beyond the scope of this paper. Market risk is still limited overall.

## 2 Recent structural changes in Western Balkan banking systems

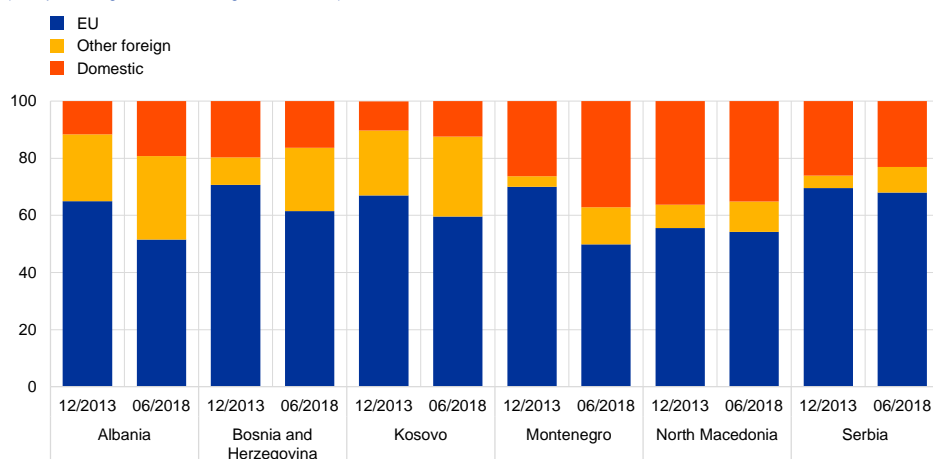
### As a general trend, in the Western Balkans in the five-year period up to June 2018 non-EU foreign banks gained market share at the expense of EU-headquartered banks.

The share of banking sector assets in the Western Balkans owned by EU-headquartered banks declined from an average of 66% in December 2013 to 57% in June 2018, while the share of assets owned by other foreign banks increased from 12% to 19%. At the same time, the asset share of domestic banks remained broadly unchanged, with only a mild increase from 22% to 24% on average.<sup>6</sup> For three countries – Albania, Montenegro and Serbia – where data are available as of the end of 2006, this is part of a more pronounced long-term trend.<sup>7</sup>

**Chart 1**

Distribution of banking sector assets by geographical origin, Western Balkans

(as a percentage of total banking sector assets)



Sources: National authorities and ECB staff calculations.  
Notes: The latest observation is for June 2018.

**There is substantial cross-country heterogeneity behind this trend.** From the end of 2013, EU banks lost the most market share in Montenegro (20 percentage points), Albania (14 percentage points), Bosnia and Herzegovina (9 percentage points) and Kosovo (7 percentage points), while the decline was negligible elsewhere (see Chart 1). In Serbia, the largest decline took place between the end of 2006 and the end of 2013, with hardly any fall thereafter. The increase in market share by other foreign players displays a similar pattern, with the strongest increase relative to the end of 2013 recorded in Bosnia and Herzegovina (13 percentage points), Montenegro (9 percentage points) and Albania (6 percentage points), followed by Kosovo, Serbia

<sup>6</sup> For the distribution of assets on average in June 2018, see Chart 16 in the data appendix.

<sup>7</sup> For these three countries on average, the asset share of EU banks fell from 74% to 57% in this longer period, and the share of other foreign-owned banks increased from 1% to 17%, while the share of domestic banks rose from 24% to 27%.

(both 5 percentage points) and North Macedonia (2 percentage points). The broad stability in the share of domestic banks also masks strong heterogeneity, both across countries and through time.<sup>8</sup>

**A key driver of this trend was EU banks' deleveraging after the global financial crisis, which seems to have come to an end more recently.**<sup>9</sup> In addition, some EU banks decided to withdraw from many of the countries, with their subsidiaries sold to other (domestic, EU and also non-EU) players.<sup>10</sup> There is also a trend, albeit moderate, towards consolidation in many banking systems, which is expected to continue in the future, with mergers and takeovers affecting the ownership structure. In a few cases, privatisation of state-owned banks continues to play a role.

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<sup>8</sup> Relative to the end of 2013, domestic banks gained asset share in two countries, namely Montenegro (11 percentage points) and Albania (8 percentage points). However, while in Albania this increase followed a big drop of 25 percentage points between the end of 2006 and the end of 2013, in Montenegro it came on top of a 9 percentage point increase in the same preceding period. In Serbia, domestic banks have lost 3 percentage points of asset share since the end of 2013, but this followed a larger increase of 7 percentage points in the preceding period, while in other countries the share of domestic banks was on a declining trend, with falls of about 3 percentage points in Bosnia and Herzegovina and 1 percentage point in North Macedonia.

<sup>9</sup> European Bank Coordination "Vienna" Initiative (2018), CESEE Deleveraging and Credit Monitor, June.

<sup>10</sup> For instance, in Albania the National Bank of Greece (NBG) was taken over by a domestic bank, while in North Macedonia Alpha Bank was bought by a non-financial company owned by a Swiss private investor. In Serbia, Alpha Bank merged with a domestic bank in December 2017 (as did Piraeus Bank in October 2018), and the bank formerly owned by NBG (Vojvodanska banka) was taken over by OTP (an EU, but not euro area bank from Hungary).

## 3 Financial intermediation and credit developments

**Overall, banking systems remained well capitalised and liquid, which in principle positioned them well to support financial intermediation.** At the aggregate level, capitalisation remained adequate. In the Western Balkans, regulatory capital was, on average, 17.9% of risk-weighted assets as of June 2018, with the majority composed of high-quality Tier-1 capital.<sup>11</sup> This is comfortably above regulatory minima in all cases. Profitability is on the rise, even if in some cases it remains low, i.e. return on equity ratios were in the range of 11-21% in June 2018. Liquid assets to total assets averaged 28% in the Western Balkans and loan-to-deposit ratios remained below 100. Nevertheless, in some countries vulnerabilities arise from a few domestically-owned banks that exhibit declining liquidity and capitalisation ratios or rely on public sector support. Average reference lending rates continued to trend down, but margins seem to be comfortable on account of lower deposit rates.

**Banks in the Western Balkans generally follow more traditional business models than their EU peers, and financial intermediation remains low.** Traditional banking business, i.e. extending loans funded mainly by local deposits, is the most important source of revenue in the Western Balkans. Despite the low interest rate environment and the decline in lending rates in recent years, the lending-deposit rate spread still remains comfortable. (More comparisons between the banking models and those of EU peers can be found in the special feature, Section 7). Financial intermediation remains low overall, with little or no advances in recent years, except for Kosovo (see Chart 2). In Albania, financial intermediation even declined over the last few years, as measured by the ratio of private sector credit to GDP. In 2017 Albania became the country with the lowest level of financial intermediation in the region. This is due to some country-specific factors such as the highest (albeit fast declining) NPL ratio in the region, high operating costs in the banking system, structural issues relating to contract enforcement and the business environment (for more information see the country annex on Albania).

**Private sector credit growth accelerated in most countries over the last two years, with the notable exception of Albania (see Chart 3).** Lending to households remained an important driver of credit growth across the region. Credit to non-financial corporates is lagging behind and remains more heterogeneous across countries, despite some strengthening in recent quarters. According to the EIB regional bank lending survey<sup>12</sup>, both credit demand conditions and credit supply conditions contributed to the expansion of lending. The increase in credit demand was supported by several factors. A key factor is the favourable macroeconomic backdrop with

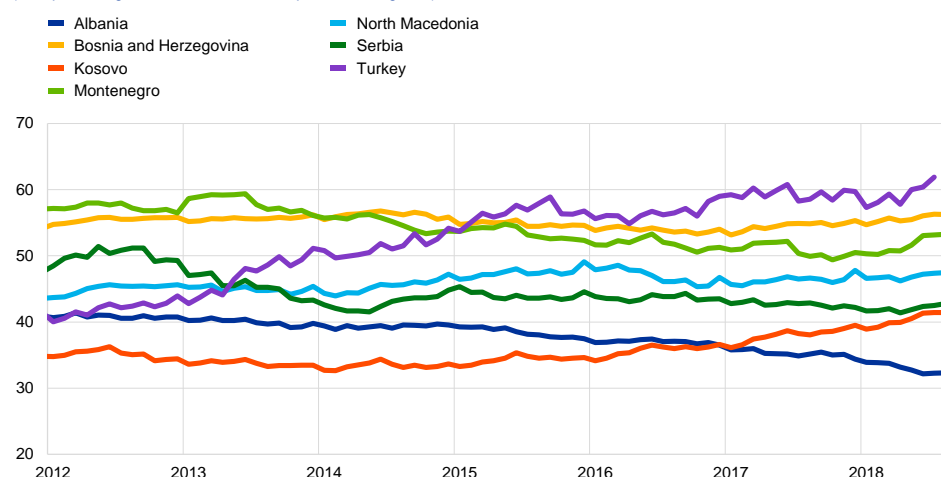
<sup>11</sup> The data used in the text can be found either in charts/tables included in the text with a direct reference, or in the tables and charts in the data appendix, Section 8. The charts and tables also include data on Turkey, which are however discussed separately in Section 6.

<sup>12</sup> EIB (2018), [CESEE Bank Lending Survey – H1-2018](#), May.

moderate but sustained real GDP growth and strengthening investment. Robust housing and non-housing related consumption and improving consumer confidence also continued to contribute positively. Supply conditions continued to improve (except for mortgages in some countries), supported by the increase in the retail and corporate deposit base and by international financial institution (IFI) funding and intra-group funding in many cases.

**Chart 2**  
Private sector credit to GDP

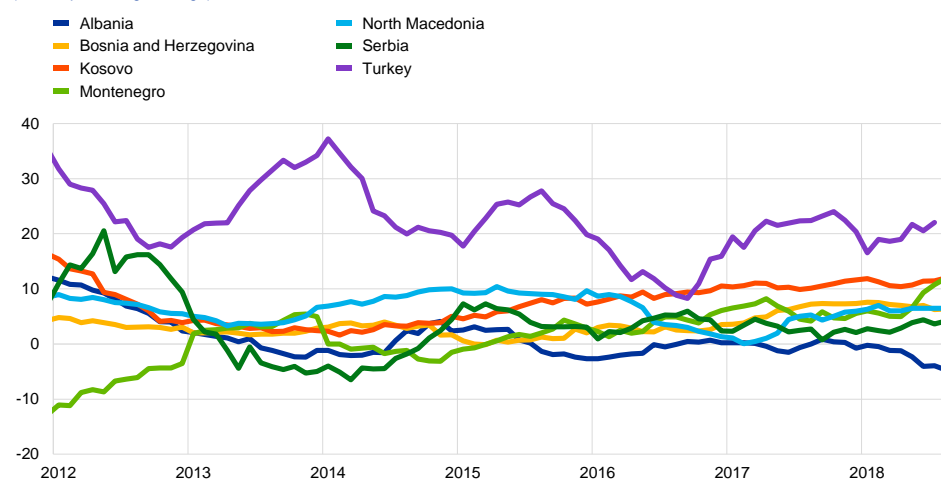
(as a percentage of nominal GDP; four quarter moving sum)



Sources: Haver Analytics, national central banks and ECB staff calculations.  
Note: Private sector comprises households and non-financial corporations.

**Chart 3**  
Private sector credit growth

(annual percentage change)



Sources: Haver Analytics, national central banks and ECB staff calculations.  
Notes: Private sector comprises households and non-financial corporations. Write-offs are included where applicable. Data are not forex-adjusted.

**Taking the overall economic environment and the room for increasing financial intermediation into account, credit developments still seem subdued on the whole.** There are still factors adversely impacting supply conditions, such as NPLs

and changes in local regulation. This holds true despite their weight having diminished substantially relative to past surveys on the back of, among other things, improved NPL ratios (see Section 4) and some domestic reforms (see below). Overall, it seems that the increase in demand is still not fully accommodated by easing credit standards, which suggests that newly extended credit may, on average, be of a better quality than in previous credit cycles.

**The deleveraging of EU parent banks largely coming to a halt also played a role in the pick-up in credit extension.** At the regional level, external positions of BIS reporting banks remained broadly stable recently, even though they remain below their peak in the third quarter of 2008 (see Section 2). This suggests that deleveraging by Western European BIS reporting banks seems to have come to an end. Overall, their restructuring of global activities has somewhat subsided, and on balance more banking groups re-leveraged than deleveraged in the first half of 2018.<sup>13</sup> Therefore, for the first time since the inception of the EIB's Central Eastern and South-Eastern Europe (CESEE) Bank Lending Survey in 2013, the net balance of the aggregate groups' exposures to the CESEE region as a whole turned positive. Group-level funding conditions improved significantly relative to the period 2015-2016, and parent group strategies target a selective expansion in the region, partly as, according to the survey, a large majority of international banking groups indicated that profitability in the region is higher than at the overall group level. Taking balance of payments data into account, the funding situation improved even further.<sup>14</sup> At the same time, pressures are building in some cases, in particular for Italian parent banks, owing to heightened political uncertainty.

**Credit developments have also been supported by recent reforms in several countries.** For example, new insolvency laws are in place in Albania and Bosnia and Herzegovina. Montenegro has expanded the coverage of its credit registry to enhance the capacity of lenders to assess credit risk. Kosovo continued to show the strongest rise in outstanding credit in the region, partly due to past reforms to firm up contract enforcement, and thereby less risk aversion on the part of banks, while increased competition may have also contributed.

**While access to finance has improved in most countries, financing of the private sector remains constrained by cautious lending practices.** According to the EIB's assessment<sup>15</sup> of access to finance in the EU neighbourhood, the quality of de jure collateral frameworks is good overall. Nevertheless, data from the Enterprise Survey of the EIB, the European Bank for Reconstruction and Development (EBRD) and the World Bank suggest that de facto the majority of collateralised loans are secured with land, which limits access to finance, especially for younger and asset-light firms. The share of loans secured by receivables is low in the Western Balkans, including relative to countries with less advanced rules governing secured transactions. Therefore, credit guarantee schemes, provided they are carefully designed, might be supportive. Currently, IFIs offer portfolio guarantees that are

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<sup>13</sup> *ibid.*

<sup>14</sup> For more detailed information, see the [CESEE Deleveraging and Credit Monitor](#) by the Vienna Initiative (June 2018).

<sup>15</sup> EIB (2018), "[Access to Finance in the EU Neighbourhood and Enlargement Countries](#)", October.

extensively used, while the success of government-established funds varies across schemes.

**Banks' exposure to the sovereign is increasing across the region, albeit from low levels.** It is relatively high in Albania and Serbia, where the Government absorbs a substantial share of available deposits.<sup>16</sup> This also reflects the important role that the State still plays in the economy in these countries, while capital markets are still underdeveloped and lending opportunities often seem limited in an environment of high liquidity. Over time, this may crowd out private sector lending in small banking systems with low financial intermediation, and increase the bank-sovereign nexus. Therefore, this trend should be closely monitored going forward.

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<sup>16</sup> Please see Table 4 in the data appendix.

## 4 Trends in asset quality

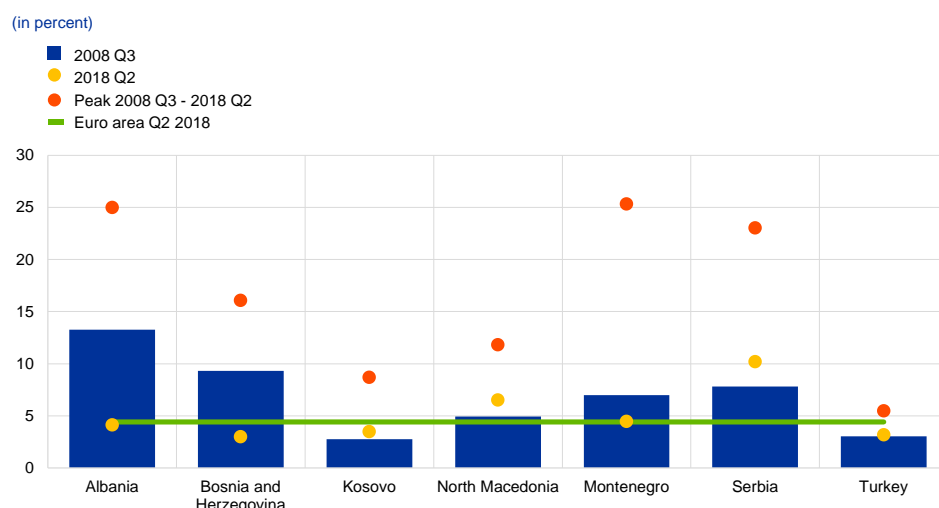
### Elevated ratios of non-performing loans in most Western Balkan countries were identified as the main challenge to financial stability for the region in past years.

Legacy NPLs burden bank balance sheets by weighing on profits and thus on the capacity of banks to generate capital organically and intermediate credit to the real economy. In the global financial crisis, as credit growth and activity slowed quickly in most countries, the ratio of non-performing loans started to increase steadily. It reached its peak in the aftermath of the crisis in the second half of 2013 and in 2014, with the exception of Montenegro, where the peak was in mid-2011. This was followed by a gradual decline in NPL ratios, which accelerated over the course of 2015-2016, but still left four Western Balkan countries with ratios above 10% in the first quarter of 2017.

### Asset quality continued to improve steadily in the Western Balkans after early 2017.

The ratio of non-performing loans to total loans has declined further in the last two years all over the Western Balkans, but it remains above or around 10% in Albania and Bosnia and Herzegovina (see Chart 4). In three cases, the ratios are now below pre-crisis levels (Kosovo, North Macedonia and Serbia, even though the latter had the highest pre-crisis ratio of 10%).<sup>17</sup> Despite the strong declines, NPL ratios also remain above those in the euro area for all countries, except Kosovo. In addition, survey results suggest that NPLs still constrain credit supply, even though their contributions diminished over time.<sup>18</sup>

**Chart 4**  
Non-performing loans to total loans



Source: National central banks.  
Note: National definitions of NPLs may differ across countries.

<sup>17</sup> In some cases (such as Bosnia and Herzegovina) data are not fully comparable through time owing to changes in NPL classification.

<sup>18</sup> EIB (2018), *CESEE Bank Lending Survey – H1-2018*, May.



**Several factors contributed to the decline in NPL ratios, including write-offs, improved resolution, sales and the increase in credit growth.** Write-offs facilitated the reduction of NPLs in Albania, North Macedonia, Serbia and more recently also in Bosnia and Herzegovina. Resolution, the collection of claims and financial restructuring also played a role (Albania, Montenegro and North Macedonia), as did NPL sales (Montenegro and Serbia). Other factors also contributed, such as bank liquidations, mergers and the conversion of CHF-indexed loans in Bosnia and Herzegovina.

**Structural reforms also supported the improvement in asset quality, but in most cases more remains to be done to facilitate swifter NPL resolution.** Structural reforms have been undertaken to improve the business environment and deepen NPL secondary markets in many countries, but several regulatory, legal and tax impediments still remain.<sup>19</sup> National authorities in Albania and Serbia adopted comprehensive NPL resolution strategies in line with past Economic and Financial Affairs Council (ECOFIN) policy guidance.<sup>20</sup> The strategies were largely, but not fully, implemented and in Serbia, as a next step, a further upgrade is planned to follow up on unresolved matters. In North Macedonia, a NPL strategy has also been adopted more recently, in December 2018. Albania is preparing to introduce a system for voluntary out-of-court restructuring. There is progress regarding the implementation of IFRS 9 in many countries, while some elements of Basel III are also effective in a few cases.

**Provisioning in most countries is adequate and improved further in recent years.** The coverage ratio of non-performing loans with provisions is generally high, suggesting that banks would be able to withstand even a full loss or write-off of bad loans. Looking at the ratio of non-performing loans net of provisions to capital, the ratios in EU (potential) candidates are below that of the euro area (Chart 5), which is also due to the high level of bank capitalisation in the region.

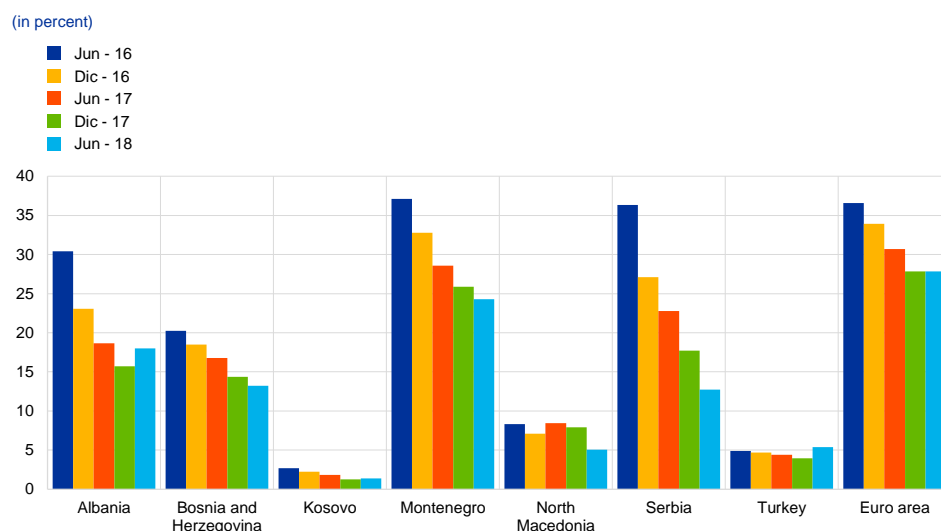
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<sup>19</sup> For more information, see the Vienna Initiative's [NPL Monitor for the CESEE region – H1-2018](#).

<sup>20</sup> Such policy guidance was repeatedly included in the Joint conclusions of the Economic and Financial Dialogue between the EU and the Western Balkans and Turkey over recent years.

**Chart 5**

**Non-performing loans net of provision to capital**



Source: National central banks.

Notes: Chart depicts NPLs minus provisions for NPLs, divided by capital. For North Macedonia, data refer to the non-financial sector.

**Several EU authorities have introduced new initiatives in the area of NPLs, which will likely affect EU (potential) candidates as they continue their alignment with EU best practices.**

The European Banking Authority, the Council of the EU, the European Commission and the ECB all continued to advance practices. For example, in March 2018 the ECB published the final addendum to its NPL guidance, specifying supervisory expectations for prudential provisioning of non-performing exposures. In July 2017 the Council adopted an action plan on reducing NPLs in Europe and the European Commission published several new directives that would contribute to harmonising NPL resolution frameworks across the EU. However, there is currently no indication of when these will enter into force. These initiatives will also have an impact on EU (potential) candidates, where many subsidiaries of EU parent banks are active, as they are on the way to aligning their frameworks with European best practices.

## 5 Developments regarding asset and liability euroisation in the banking sector

**The high degree of unofficial euroisation remains a tail risk for financial stability, and thus constitutes the second main source of risk.**<sup>21</sup> Widespread currency substitution has a long tradition in the Western Balkans, which is, among other things, reflected in the high shares of deposits and loans linked to foreign exchange (mainly the euro).<sup>22</sup> The lack of confidence in the national currency, on the back of high inflation and depreciation episodes in the not-so-distant past, is often an important driver of this phenomenon, reinforced by strong integration with the euro area via trade, migration, remittances and financial channels. This poses an indirect credit risk in the case of lending to unhedged borrowers, who may become unable to repay their loans in the tail event of large national currency depreciations. The risk is mitigated in a few cases by the fact that exchange rate regimes feature the euro as the anchor currency (of stabilised arrangements or a currency board). Nevertheless, the widespread use of foreign exchange also reduces the room for manoeuvre of monetary policy and exchange rate policy (even in floating regimes), impairs monetary transmission and reduces seigniorage revenues. Therefore, past ECOFIN policy guidance recommended promoting the use of domestic currencies in the financial systems of the Western Balkans.<sup>23</sup>

**The phenomenon is also present in non-euro area EU countries, but overall to a lesser extent than in the Western Balkans.** Looking at data for six non-euro area EU countries (Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania), on average, foreign exchange-linked loans had a 30% share in total loans in mid-2018, while in the Western Balkan economies the average share was 55%. The difference is even more pronounced for deposits, where the EU6 average stood at 29%, while the Western Balkan average reached 63%. However, there is substantial heterogeneity across the listed EU countries. The Czech Republic has low shares (13% for loans, 8% for deposits), and Croatia records the highest shares, above those in some non-EU Western Balkan countries (56% for loans, 60% for deposits), possibly reflecting the joint legacy with Western Balkan countries.

**The share of forex-linked loans is higher in the non-financial corporate sector than in the household sector in both the Western Balkans and the EU6.** The share of forex-linked deposits is broadly the same for both sectors in the EU6 on average, while in the Western Balkans the average share is particularly high for households (70%, against 46% for non-financial corporates). In the Western Balkan countries, foreign exchange-linked loans are largely covered by forex deposits, mitigating the direct exchange rate risks for banks. At the same time, this strong forex

<sup>21</sup> This part mainly focuses on four Western Balkan countries with national currencies, excluding Kosovo and Montenegro, where the euro is the legal tender and the share of loans/deposits linked to other foreign currencies is low.

<sup>22</sup> Forex shares refer to products denominated in and/or indexed to foreign currency.

<sup>23</sup> As included in the Joint conclusions of the Economic and Financial Dialogue between the EU and the Western Balkans and Turkey over recent years.

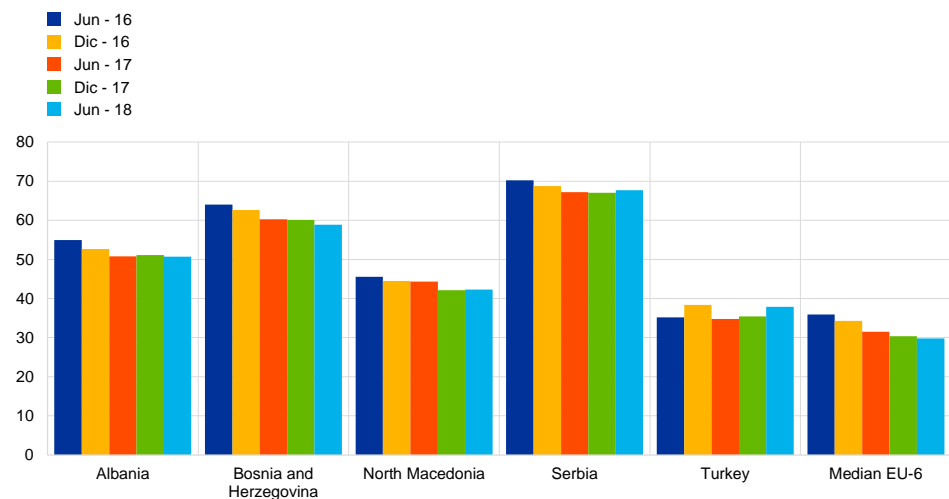
deposit base also provides a stable source of funding and thus is conducive to foreign exchange lending.

**All Western Balkan banking systems saw the share of foreign exchange-linked loans to total loans decline gradually over the last few years, although the level still remains high (see Chart 6).** The trend is supported by lower interest rates on domestic currency-denominated products, given generally subdued inflationary pressures in the region and the low interest rates in the euro area. The coverage of these loans by forex deposits also improved or remained broadly unchanged (Chart 7). Therefore, the direct exposure of banks to exchange rate risks is small, while the indirect credit risk via the exposure to unhedged borrowers remains substantial.

### Chart 6

#### Private sector forex loans to total loans

(as a percentage, private sector)

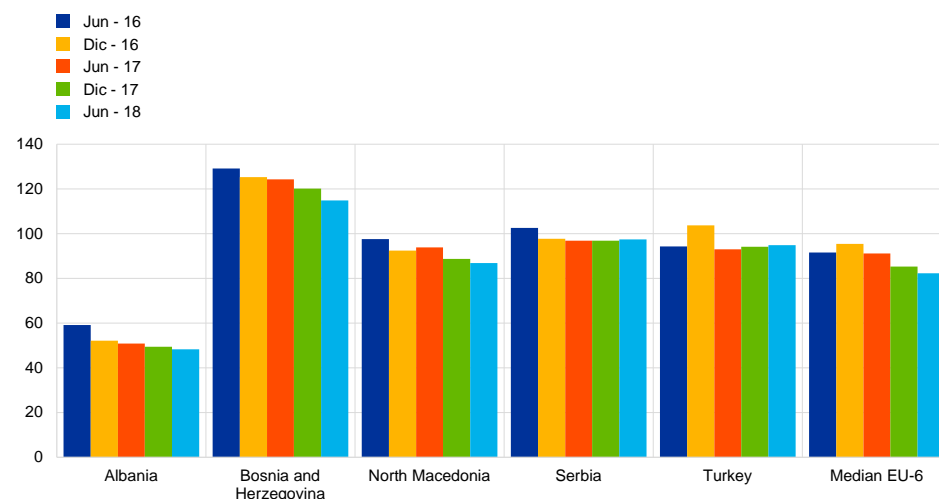


Source: National central banks.

Note: Private sector comprises households and non-financial corporations.

**Chart 7****Private sector forex loans to forex deposits**

(as a percentage, private sector)



Source: National central banks.

Notes: In the case of Bosnia and Herzegovina, figures include non-resident deposits. Private sector comprises households and non-financial corporations.

**Strengthening the use of domestic currencies continues to be warranted to reduce the tail risks and drawbacks associated with the widespread currency substitution.** To some extent, the use of the euro reflects the characteristics of these economies and their strong ties with the euro area. However, a recent IMF Working Paper focusing on Albania empirically estimates the level of optimal euroisation and concludes that in Albania (and many peers) actual euroisation is about 10 percentage points above the optimal/benchmark level for deposits.<sup>24</sup>

**In most countries, authorities continued their efforts to promote the use of domestic currencies, with some progress being made, though mostly on the asset side.** Increasing trust in the domestic currency is a long-term challenge, hinging crucially on preserving macroeconomic and financial stability for a prolonged period. At the same time, the process can be supported by other measures.<sup>25</sup> Albania and Serbia have adopted comprehensive strategies to this end. For Serbia, the Strategy of Dinarisation of the Serbian Financial System (adopted in March 2012) has been implemented and authorities adopted the new strategy in December 2018, while for Albania the implementation is in an initial phase. North Macedonia also adopted a strategy recently (in December 2018), and certain measures had already been introduced. A prudential measure applied in these countries is differentiated reserve requirements and/or the differentiated remuneration of these, favouring deposits in domestic currency. Other measures used in some cases include preferential tax and subsidy policies, mandatory down-payments and LTV limits targeting forex loans,

<sup>24</sup> See, for example, della Valle et al. (2018), "Euroization Drivers and Effective Policy Response: An Application to the case of Albania", *IMF Working Paper Series*, No 18/21, International Monetary Fund, January.

<sup>25</sup> Windischbauer (2016), "Strengthening the role of local currencies in EU candidate and potential candidate countries", *ECB Occasional Paper Series*, No 170, April. This paper suggests that macroeconomic and financial stability is a necessary but not a sufficient condition, and underpins this by successful de-dollarisation case studies (e.g. the experience of Peru and Israel).

higher risk weights and outright bans on certain forex products. Prudential measures should be accompanied by information on the risks associated with forex borrowing and efforts to develop primary and secondary markets for domestic currency securities, ideally as part of a carefully designed concerted strategy involving all relevant stakeholders.

## 6 The Turkish banking system in the light of recent episodes of financial turmoil

**The Turkish lira has lost considerable value in recent years with strong depreciation observed during the currency stress episodes in August 2018 and spring 2019.** Since the beginning of 2016 the Turkish lira has lost almost half of its value against a background of geopolitical tensions and country-specific economic and financial vulnerabilities and imbalances, and a more challenging environment for emerging markets more generally, in view of tightening global financial conditions. In particular, as of early August 2018, a loss of confidence in economic and monetary policy-making in Turkey combined with heightened political tensions with the United States culminated in a sharp depreciation of the Turkish lira. The exchange rate subsequently regained a significant amount of its losses observed since August 2018, but started to depreciate again in spring 2019 on account of policy uncertainty.

**Following those recent stress episodes, financial conditions and the monetary policy stance have tightened sharply.** Financial conditions spiked in August and again in May 2019 on account of a rise in government bond yields and credit default swap (CDS) spreads and a plunge in the BIST 30 stock market index (Chart 8). As a response, and to combat spiralling inflation caused by the strong depreciation, the Central Bank of the Republic of Turkey (CBRT) significantly tightened its monetary policy stance by hiking the effective cost of funding for banks in several steps by a cumulative 625 basis points to 24% in 2018. Furthermore, in spring 2019 the CBRT twice temporarily raised the effective policy rate to 25.5% in response to financial market stress. The CBRT also adopted a set of changes in its reserve requirement and Turkish lira and forex liquidity management policies with the aim of easing (forex) liquidity conditions.

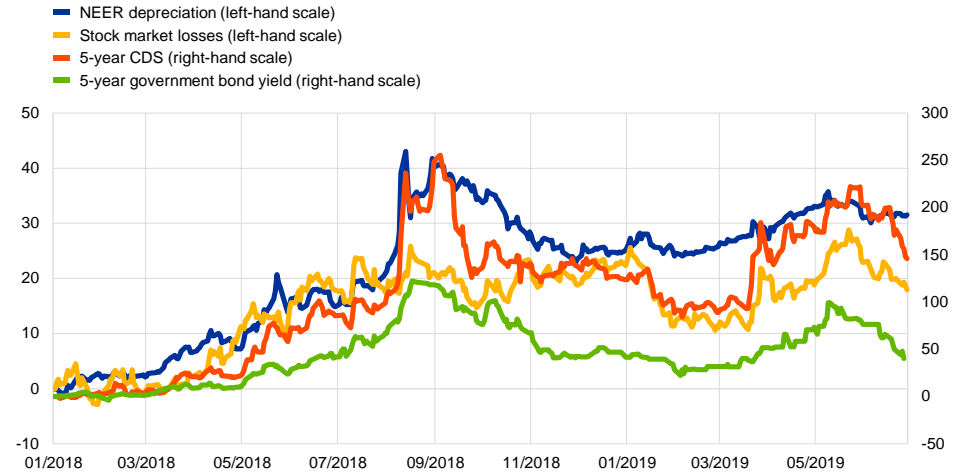
**Following an overheating of the economy in 2017, the economy went into recession in the second half of 2018.** The economic upturn in 2017 (real GDP grew by 7.4%) was supported by strong policy stimulus via fiscal policy, policy-induced strong credit growth and a relaxation of macroprudential tools in September 2016, while real interest rates remained very low. The economy started to slow down in the first half of 2018 and entered a recession in the second half of the year, resulting in an annual average GDP growth rate of 2.6% for 2018.

**Strong credit growth until mid-2018 was supported by a large-scale expansion of the credit guarantee fund.** From the beginning of 2017 to July 2018, (non-forex-adjusted) lending to the private sector increased strongly at an average annual growth rate of 21%. A sizeable part of the growth in lending, especially in 2017, can be attributed to the activity of the credit guarantee fund (CGF) and the relaxation

of macroprudential measures.<sup>26</sup> The design of the CGF might entail some moral hazard, while its usefulness for development purposes is questionable.<sup>27</sup>

**Chart 8**  
Financial market developments in Turkey

(percentage change vis-à-vis 2 February 2018)



Source: JP Morgan, Financial Times, national authorities and ECB staff calculations.

<sup>26</sup> The CGF is a public-private partnership fund (shareholders are government agencies, private sector representatives and banks), which guarantees between 75% and 100% (depending on the borrower and loan type) of corporate loans backed by the Treasury. In March 2017, the capacity of the CGF was effectively increased to TL 200bn (6.4% of GDP) with another TL 85bn increase effective in 2018. The use of the CGF by banks was further incentivised by allowing banks to assign a zero regulatory risk weight to the portion of domestic currency loans backed by the CGF.

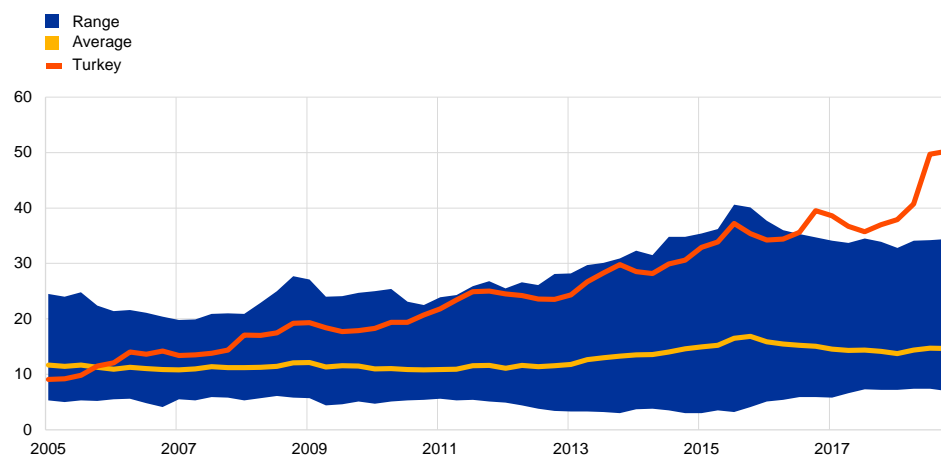
<sup>27</sup> Given that loans under the CGF are almost completely guaranteed, and that their capital costs are close to zero, the incentives for banks to apply adequate lending standards may be impaired to a certain extent, and thus the CGF may include an element of moral hazard. It should, however, be noted that the upper limit of reimbursement for each institution amounts to 7% of the total amount guaranteed. Thus, if a bank's NPL ratio for loans guaranteed by the CGF exceeds 7%, the bank has to bear the additional losses. Furthermore, the non-targeted nature of the CGF means it is not possible to tackle specific market failures. In line with the regulation that states that the majority of loans have to be granted to SMEs, 75% of the guarantees by the CGF backed SME loans. However, credit guarantee mechanisms in other countries often focus solely on specific sectors of the economy that are known to be credit constrained, e.g. SMEs.



## Chart 9

### Foreign-currency-denominated debt of non-financial corporates in EMEs

(as a percentage of GDP)



Notes: Emerging market economies (EMEs) comprise Argentina, Brazil, Chile, China, Colombia, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, South Africa and Thailand. The range spans from the maximum to the minimum ratio among the countries in each year. The latest observation is for the fourth quarter of 2018.

#### As lending rates have risen sharply since August 2018, credit activity has stalled.

The economic downturn and tight financial conditions fed into higher lending rates, culminating in September 2018 (weighted average interest rates for new loans denominated in Turkish lira reached 37% for household lending and 35.9% for lending to commercial entities). These eased somewhat thereafter, mainly on account of a loosening of credit conditions by public banks. As a consequence, credit to the private sector has decelerated sharply.<sup>28</sup>

#### While Turkey's banking sector appears to have buffers to absorb shocks, headline financial stability indicators might understate underlying vulnerabilities due to regulatory forbearance.

The capitalisation of the Turkish banking sector continues to be well above minimum standards and has further increased in the past two years (see Table 1). Low liquidity buffers, on the other hand, remain a cause for concern, including in the light of the banking sector's reliance on short-term financing, of which only 19% is covered by liquid assets. The strong expansion of the loan volume through the CGF at a broadly constant net interest margin and gains in cost efficiency led to an increase in profitability of the banking sector. The banking sector's ratio of NPLs to total loans remained low, albeit that it recently rose to above 4% (as of the first quarter of 2019; compared to 3% in the second quarter of 2018). However, there is some evidence that the regulatory ratio might understate the extent of asset quality impairment owing to regulatory forbearance and other measures: (i) reclassifications of loan categories undertaken by the Banking Regulation and Supervision Agency (BRSA),<sup>29</sup> (ii) the rollover of potentially distressed loans undertaken under the umbrella of the CGF, and (iii) a number of recent measures to facilitate loan restructuring (see below). Indeed, IMF

<sup>28</sup> As of March 2019, forex-adjusted total annual loan growth to the private sector amounted to 4.5%.

<sup>29</sup> For example, on 15 August the BRSA adopted a regulation to facilitate the reclassification of loans with a watch status (i.e. Group 2 loans) to standard-quality (i.e. performing) loans if the debtor is not in financial trouble. This measure is aimed at potentially reducing bank provisions and increasing liquidity.

estimates of a broader definition of distressed loans are higher than the reported headline ratio.<sup>30</sup>

**Going forward, the Turkish banking sector is subject to significant financial stability risks, the main one being indirect credit risk stemming from corporates' forex loans.** The nominal share of forex loans in total loans to the private sector has continued to rise on account of the exchange rate effect and amounted to 36% as of July 2018. Besides forex loans from local banks, the corporate sector is also burdened by a high share of external debt denominated in forex. Overall, forex debt to the non-financial corporate sector amounts to 50.2% of GDP, which is very high compared to other EMEs (see Chart 9). Forex loans are denominated almost exclusively in euro or US dollars, with the shares being roughly equal. Since forex lending to the household sector is not permitted, forex loans are concentrated in the corporate sector. From May 2018 authorities also banned small firms with no forex income from taking up forex loans, and forex-indexed loans were banned for all firms. Furthermore, the CBRT is building a database to better understand and identify the dynamics of large-scale forex borrowing and its associated vulnerabilities.

**Given the high share of forex loans in total loans, the continuous and strong depreciation of the Turkish lira has worsened the repayment capacity of corporates, which might lead to a further deterioration of banks' asset quality.** Most of the forex loans, either from domestic or external sources, have longer-term maturities, lowering short-term exchange rate pressures to some extent. However, companies that are less naturally hedged, such as smaller-sized firms in the energy or construction sectors with revenues mostly in local currency, remain more vulnerable.<sup>31</sup>

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<sup>30</sup> The IMF estimates that a broader definition of impaired loans (including restructured credits, “watch list” loans, and NPLs sold to third parties) amounts to around 8% of all loans (see the IMF’s [Turkey: 2018 Article IV Consultation](#), April 2018).

<sup>31</sup> The sectoral breakdown shows that out of forex loans up to USD 15 million, a non-negligible share has been granted to firms in the energy or construction sectors (see Chapter V.1 of the CBRT’s [Financial Stability Report – May 2018](#)).

**Table 1****Turkey: Financial soundness indicators**

(percentages)

	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
<b>Regulatory capital to risk-weighted assets</b>	15.6	15.5	15.8	16.0	15.6	16.0	16.9	17.2	16.8	16.6	16.3
<b>Regulatory Tier-1 capital to risk-weighted assets</b>	13.2	13.3	13.5	13.7	13.1	13.5	14.1	14.4	14.1	13.9	13.5
<b>Common Equity Tier 1 capital (CET1) to risk-weighted assets</b>	13.3	13.4	13.6	13.8	13.2	13.6	14.2	14.4	14.1	13.9	13.5
<b>NPLs net of provisions to regulatory capital<sup>1)</sup></b>	5.0	5.1	4.9	4.8	4.7	4.6	4.4	4.0	4.0	4.6	5.4
<b>NPLs to total gross loans<sup>1)</sup></b>	3.2	3.4	3.5	3.5	3.4	3.2	3.1	3.0	3.0	2.9	3.0
<b>of which in FX (NPLs in FX to total NPLs)</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Households: NPLs to total gross loans to households</b>	4.3	4.4	4.4	4.5	4.3	4.2	3.8	3.6	3.5	3.4	3.2
<b>Non-financial corporations: NPLs to total gross loans to non-financial corporations</b>	2.7	2.9	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	3.1
<b>Return on assets</b>	1.2	1.2	1.3	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6
<b>Return on equity</b>	10.6	10.9	11.9	13.2	13.2	14.4	14.3	14.3	14.6	14.2	14.4
<b>Liquid assets to total assets<sup>1)</sup></b>	10.5	10.9	10.6	11.7	13.1	11.5	10.8	10.2	11.3	11.1	11.4
<b>Liquid assets to short-term liabilities<sup>1)</sup></b>	17.5	18.0	17.9	19.3	22.1	19.1	18.1	16.7	18.7	18.1	19.2
<b>Net open position in foreign exchange to regulatory capital</b>	0.9	0.9	-0.5	0.1	-1.3	-0.2	0.3	0.1	0.5	2.5	0.1
<b>Interest margins to gross income</b>	68.3	69.3	67.4	67.2	67.0	67.2	70.0	70.3	71.4	66.5	66.3
<b>Cost-to-income ratio</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Non-interest expenses to gross income</b>	56.8	51.2	48.8	49.1	49.6	45.3	46.7	47.4	49.2	50.0	50.7
<b>Foreign-currency-denominated loans to foreign-currency-denominated deposits</b>	88.7	86.5	89.8	97.9	95.2	86.7	82.4	82.4	83.7	84.4	83.3
<b>Foreign-currency-denominated loans to total loans<sup>1)</sup></b>	29.0	28.5	28.5	29.3	31.4	30.4	28.7	29.4	30.0	30.6	32.8
<b>Foreign-currency-denominated liabilities to total liabilities<sup>1)</sup></b>	44.6	44.0	43.1	41.4	44.5	46.4	45.7	45.6	45.5	46.2	48.2
<b>Household debt to gross domestic product</b>	17.8	17.5	17.5	17.5	17.6	17.5	17.4	17.3	17.0	16.6	n.a.
<b>Residential real estate prices (percentage change/last 12 months)</b>	18.4	15.4	13.9	13.9	12.3	13.4	12.7	n.a.	n.a.	n.a.	n.a.
<b>Loan-to-deposit ratio</b>	113.3	112.6	113.5	113.5	112.4	113.8	114.6	114.4	115.0	115.7	115.8
<b>Loan-to-value ratios for housing loans</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Ratio of external liabilities to total liabilities of banks</b>	24.1	23.6	24.4	23.9	24.6	24.6	23.9	24.1	24.3	23.7	24.9

Source: Central Bank of the Republic of Turkey.

Notes: Non-performing loans are all loans and other receivables classified as with limited recovery means, suspicious recovery or having the nature of loss, according to the Regulation on procedures and principles for determination of qualifications of loans and other receivables by banks and provisions to be set aside.

1) Development and investment banks are excluded. Construction sectors with revenues mostly in local currency, remain more vulnerable.

**Moreover, credit risks have risen as the economic downturn started to challenge the repayment capacity of corporates and households.** Besides being affected by the weakness of the lira, the corporate sector is challenged by the economic downturn, while, at the same time, borrowing costs might remain elevated for an extended period of time in order to combat inflationary pressures, which takes a toll on new lending and makes it costlier to roll over loans. In the household sector,

high inflation weighs on real wages while unemployment might edge up during the economic downturn, impinging on households' ability to service loans. Since the turmoil of August 2018, some signs of stress in the corporate sector have emerged as, according to media reports, a number of large corporates have applied for restructuring. On firm liquidations, official data does not yet exhibit an upward trend, which might be related to regulatory measures introduced by the Turkish authorities to prevent corporate default and facilitate restructuring.<sup>32</sup>

**Banks' dependence on short-term cross-border wholesale funding creates significant rollover risks.** The elevated and rising loan-to-deposit ratio of around 116% as of the second quarter of 2018 mirrors the high dependence of banks on wholesale and capital market funding. A significant part of this financing is obtained externally, which exposes the banking sector to changes in global financial conditions and investor sentiment as well as to exchange rate risk. Moreover, a large part of the external funding is of short-term maturity, with more than 52% of external debt having a remaining maturity of less than one year as of March 2019. Thus, going forward, in order to avoid a depletion of liquidity buffers and prevent funding stress, the ability of banks to rollover their external debt will be crucial.

**The deposit base has been stable in recent months despite the financial turmoil, but currency and maturity mismatches warrant attention.** The nominal share of forex deposits in total deposits of the private sector has risen over time, reaching 53% in August, but this was mainly driven by the exchange rate effect of the lira depreciation. The rising share of forex deposits added to the growing currency mismatch on banks' balance sheets, with excess liquidity in forex and rising funding needs in lira. In addition, 21.7% of total deposits of the private sector are sight deposits and 75% of total deposits have a maturity of less than one year, making the banking sector vulnerable to sudden deposit withdrawals.

**While shares of major Turkish banks fell significantly in response to financial market stress, they have mostly since recovered.** After registering significant losses in the aftermath of the financial stress episodes, most shares of domestic Turkish banks have since recovered, trading higher than in July 2018.

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<sup>32</sup> In particular: i) the Banks Association of Turkey has announced an agreement to regulate the framework for loan restructurings, which banks and financial institutions accounting for 90% of outstanding loans have already signed; and ii) a temporary change to the trade law (in effect until the end of 2022) provides that Turkish companies are no longer required to count foreign-currency losses when assessing whether to file for bankruptcy.

# 7 Special feature: maturity mismatches among banks in EU (potential) candidates – how much cause for concern?

## 7.1 Background and motivation

**Maturity or liquidity mismatches, while at the heart of most modern banking, were one of the triggers of the global financial crisis – and also served to amplify it.** In particular, the transformation of maturity – i.e. taking in funding at short maturities from depositors or financial markets and lending at long(er) maturities to borrowers, thereby earning a positive interest margin – is seen as one of the core functions of contemporary banking. At the same time, such maturity transformation entails some non-negligible risks, which – in the most extreme case – may take the form of a bank run where a large share of depositors wish to liquidate their deposits with immediate effect, a demand a bank may be unable to meet owing to the lower liquidity of its (long-term) assets.<sup>33</sup>

**In the years before the crisis, solvency considerations were at the heart of banking supervision, expressed in the Basel II regulatory framework.** Indeed, adequate capital cushions, as defined by the Basel II regulations, and deposit insurance were seen as the first line of defence of the banking system against systemic events. However, in the run-up to the crisis the increasing reliance of the balance sheet expansion of some banks on wholesale, market-based funding with generally short maturities intensified liquidity mismatches, which have been widely identified in the academic literature as an additional source of financial vulnerability.<sup>34</sup>

**In the wake of the crisis, regulations ensuring adequate capital cushions were complemented with rules safeguarding an adequate level of liquidity.**<sup>35</sup> Next to modified minimum standards for banks' capital adequacy, the Basel III regulatory framework is also propagating a liquidity coverage ratio (LCR) and a net stable funding ratio (NSFR), which entered into force on 1 January 2015 and 1 January 2018 respectively. While the LCR strives to ensure that banks are able to withstand a period of stressed liquidity conditions for at least 30 days, the NSFR explicitly tries to address

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<sup>33</sup> A loss of access to market funding, where holders of banks' (short-term) debt securities are unwilling to roll over their claims, would have a similar effect.

<sup>34</sup> See for example Diamond, D.W. and Dybvig, P.H. (1983), "Bank Runs, Deposit Insurance, and Liquidity", *Journal of Political Economy*, Vol. 91, No 3, pp. 401-419; or Diamond, D.W. and Rajan, R.G. (2001), "Liquidity Risk, Liquidity Creation, and Financial Fragility: A Theory of Banking", *Journal of Political Economy*, Vol. 109, No 21, pp. 287-327.

<sup>35</sup> A growing body of academic research has supported amending the regulation of banks in this direction. See for example Morris, S. and Shin, H.S. (2008), "Financial Regulation in a System Context", *Brookings Papers on Economic Activity*, No 2 for some early work advocating the introduction of a leverage ratio. For an overview of the theoretical literature underpinning the justification for more stable, i.e. longer-term, funding of banks, see, for example, Segura, A. and Suarez, J. (2016), "How Excessive is Banks' Maturity Transformation", *The Review of Financial Studies*, Vol. 30, No 10, pp. 3538-3580.

maturity mismatches by requiring banks to maintain an amount of stable funding appropriate for the liquidity and maturity of their assets.<sup>36</sup>

**In view of the role maturity mismatches played at the time of the crisis and developments in the regulatory landscape since then, assessing banks in EU (potential) candidates (EU (P)Cs) on this aspect of financial soundness has merit.** While, at a cursory glance, banks in EU (P)Cs appear to share few features with the institutions that failed in 2008-2009, they exhibit some salient features which render liquidity mismatches a possible source of vulnerability. First, as banks in the region are generally well capitalised, issues of liquidity might be a more likely trigger of financial fragility than issues of solvency. Second, loan and deposit euroisation remain sizeable in many countries, amplifying potential risks from maturity mismatches. Households and corporations in some EU (P)Cs seem generally reluctant to hold assets in domestic currency. Bank clients also tend to prefer shorter maturities when holding deposits in national currency, thereby exacerbating potential maturity mismatches. In addition, flight to (short-term) foreign currency deposits at times of heightened financial stress may further aggravate existing maturity mismatches in a crisis. Lastly, as several countries in the region are in the process of phasing in Basel III regulations, gauging whether banks are in a position to meet regulatory benchmarks, such as the LCR or the NSFR, without substantial changes in the structure of their assets or liabilities seems worthwhile.

## 7.2 Banking sectors in EU (potential) candidates: traditional banking to the fore

**Compared to the EU11 and the largest euro area countries (EA4), banks in EU (P)Cs tend to rely on a more traditional business model, characterised by the taking of deposits and the provision of loans.** For the median banking sector in EU (P)Cs, close to 60% of assets were held as claims on the non-financial private sector in late 2018 (see Chart 10),<sup>37</sup> with shares ranging from 57% (Turkey) to 68% (Kosovo), leaving the notable exception of Albania (35%) where a large portion of assets (23%) are concentrated in domestic government securities. By contrast, non-financial private sector claims of the median banking sector accounted for only 49% in the EU11 (33% to 68% range) and merely 34% in the EA4 (26% to 43% range), pointing towards a more diversified asset structure among banks in these two country groups.<sup>38</sup> Likewise, the median banking sector in EU (P)Cs relies more heavily on the deposits of households and non-financial corporations for its funding (71%, with a range of 56% to 82%, Chart 11) than banks in the EU11 (61%, with a range of 43% to

<sup>36</sup> For more details, see Basel Committee on Banking Supervision (2013), "[Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools](#)", Bank for International Settlements, January and Basel Committee on Banking Supervision (2014), "[Basel III: The Net Stable Funding Ratio](#)", Bank for International Settlements, October.

<sup>37</sup> Owing to the higher granularity of data available for EU (P)C banks on their transactions with the non-financial private sector (households and non-financial corporations), the analysis in this special feature needs to abstract from government deposits and loans and from the deposits and loans among banks and other financial intermediaries, which are only reported in a more aggregate manner. Therefore, all figures reported in this special feature refer to loans and deposits of the non-financial private sector only.

<sup>38</sup> Considering means instead of medians yields equivalent results.

67%) or the EA4 (36%, with a range of 23% to 39%). The rather embryonic state of financial market development in many of the EU (P)Cs may play a role in this regard, effectively limiting the variety of possible assets and liabilities to which banks could gain exposure, thereby lowering the prevalence of more sophisticated – and frequently more complex – financial instruments in the balance sheets of banks.

**Partly as a consequence of the loan- and deposit-centred balance sheets of banks in EU (P)Cs, loan-to-deposit ratios in the region are mostly lower than in the EU11 or the EA4 (see Chart 12).**<sup>39</sup> In Albania (48%), Montenegro (75%), North Macedonia (84%) and Kosovo (93%), loan-to-deposit ratios hovered below or near corresponding (average) figures for the EU11 (90%) by the end of the first half of 2018 with only Serbia (100%) coming close to the level prevailing in the EA4 (104%). By contrast, Turkey registered a notably higher loan-to-deposit ratio (120%) that has also followed a mildly rising trend in recent years. This differs from other EU (P)Cs, the EU11 and the EA4, where ratios have remained stable or declined. Turning to the individual components of the loan-to-deposit ratio, deposits in EU (P)Cs increased rather strongly over the period from January 2009 to June 2018, mostly outpacing or meeting increases in the stock of loans (see Chart 13).

**From the perspective of funding mismatches in the balance sheets of banks, with the exception of Turkey, loans to the non-financial private sector in EU (P)Cs are fully funded by corresponding household and corporate deposits.**

This obviates the need to rely on alternative, non-deposit sources of financing to maintain the present inventory of loans. In Albania, Montenegro and, to a lesser extent, North Macedonia, there even seems to be room to substantially expand the origination of loans to the non-financial private sector from the existing deposit base. Despite the rather comforting level of loan-to-deposit ratios in EU (P)Cs, the maturity structure of deposits matters: even if the stock of deposits appears comparatively ample in most countries, a concentration in shorter maturities may pose a financial stability risk, as, if quickly withdrawn, banks may face significant challenges to rapidly provide other means of funding.

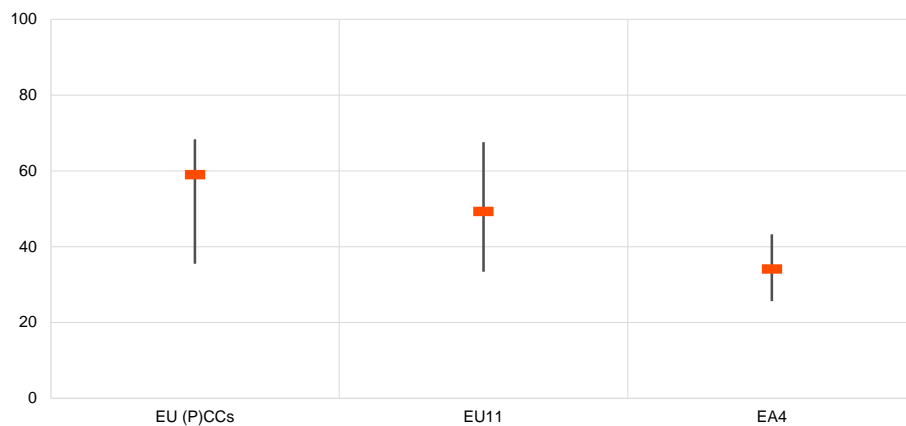
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<sup>39</sup> Owing to data limitations, the analysis in the remainder of the special feature excludes Bosnia and Herzegovina.

### Chart 10

#### Share of non-financial private sector loans in total assets

(maximum, median and minimum percentages)

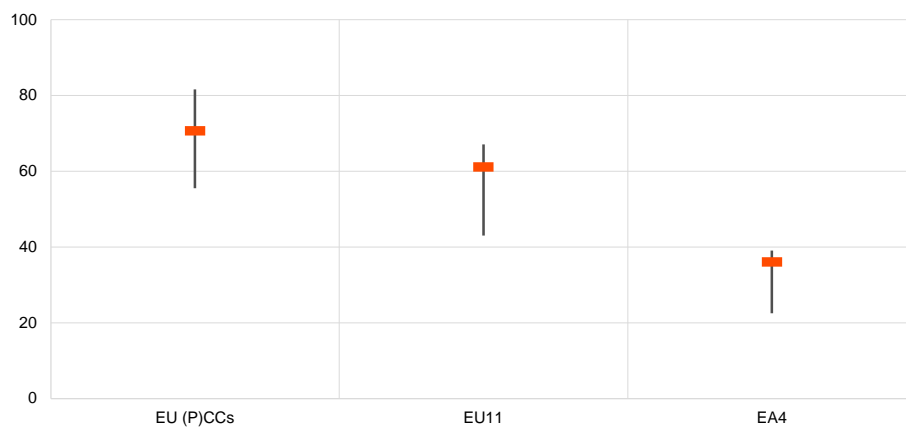


Sources: ECB, national central banks and ECB staff calculations.

### Chart 11

#### Share of non-financial private sector deposits in total liabilities

(maximum, median and minimum percentages)



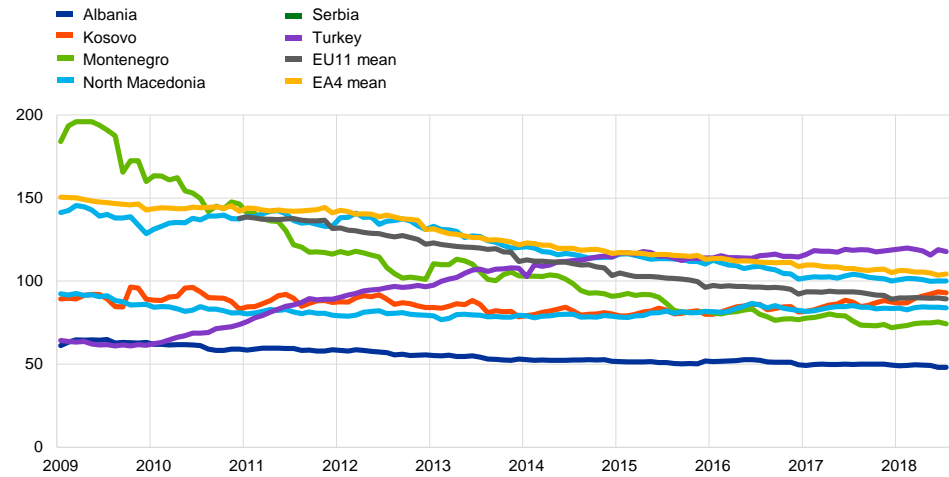
Sources: ECB, national central banks and ECB staff calculations.



**Chart 12**

**Non-financial private sector loan-to-deposit ratios**

(percentages)

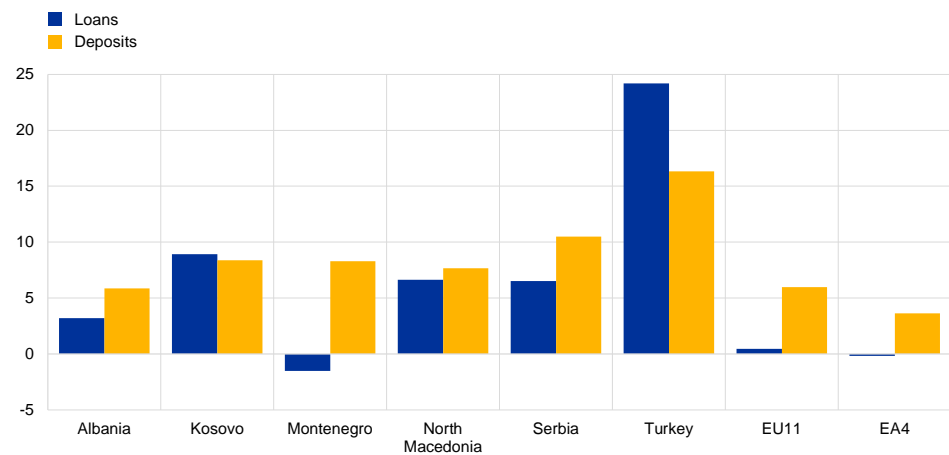


Sources: ECB, national central banks and ECB staff calculations.  
 Note: Figures for the EU11 and the EA4 represent averages across individual countries.

**Chart 13**

**Growth in loans and deposits, January 2009 to June 2018**

(percentages, average annualised rates)



Sources: ECB, national central banks and ECB staff calculations.  
 Note: Figures for the EU11 and the EA4 represent averages across individual countries. Data are not foreign currency adjusted.

**7.3 Maturity mismatches in EU (potential) candidates are increasing yet generally lower than in EU peers**

**Compared with in the EU11 and the EA4, in most EU (P)Cs a considerably higher share of long-term non-financial private sector loans is funded by long-term deposits.**<sup>40</sup> Apart from Turkey, where long-term deposits financed 4% of

<sup>40</sup> For the purpose of this special feature, long-term loans and deposits are defined as exposures of a maturity of more than one year. All loans and deposits with a maturity of less than one year are considered short term.

long-term loans in June 2018, corresponding shares for the remaining EU (P)Cs are on a par with or outpacing figures for the EU11 (13%) and the EA4 (12%), ranging from 13% in Serbia to 48% in Albania (see Chart 14, blue bars).<sup>41</sup> Furthermore, considering short-term deposits (orange bars) as well, long-term loans in EU (P)Cs can be more than fully financed by the deposit base. In Albania, North Macedonia and Montenegro the degree to which (short- and long-term) deposits underpin long-term loans is particularly high, far outpacing levels in Kosovo, Serbia and Turkey, which are more in line with the EU11 and the EA4. Under the assumption that deposits provide a rather stable source of funding, the maturity structure of deposits underpinning long-term loans in EU (P)Cs therefore appears comparatively robust.

**The risks associated with maturity mismatches in most EU (P)Cs have intensified somewhat in recent years, although they are mitigated to some extent by banks' ample liquidity buffers.** Overall, the tendency of banks – and their opportunities – to finance their long-term loans with long-term deposits seem to have lessened in some EU (P)Cs in recent years (see Chart 15). While the share of loans with a maturity of more than one year funded by corresponding deposits has recently increased in Albania, it has seen notable declines in Kosovo, Montenegro and Serbia. In the light of more favourable domestic and euro area financing costs over the past few years, it is not immediately obvious why banks in these three countries have not used the leeway offered by cheaper long-term funding rates to extend the maturities of their deposits. Lower demand for long-term deposits in the face of falling opportunity costs from holding interest-bearing assets of a short maturity might have been a factor. Indeed, the share of long-term loans financed by long-term deposits has also shrunk in the EU11 and the EA4, roughly in line with decreasing euro area financing costs. In the case of sizeable withdrawals of short-term deposits, banks might be obliged to rely on alternative sources of funding or – in their absence – reduce the provision of credit to borrowers. However, the substantial amount of liquid assets maintained by most banking sectors in the region seems to allow them to withstand even substantial deposit outflows. At the same time, increased maturity mismatches in EU (P)Cs may compress the profit margins of banks in an environment of rising interest rates if costs from retaining (short-term) deposits adjust more rapidly than revenues generated from (long-term) loans.<sup>42</sup>

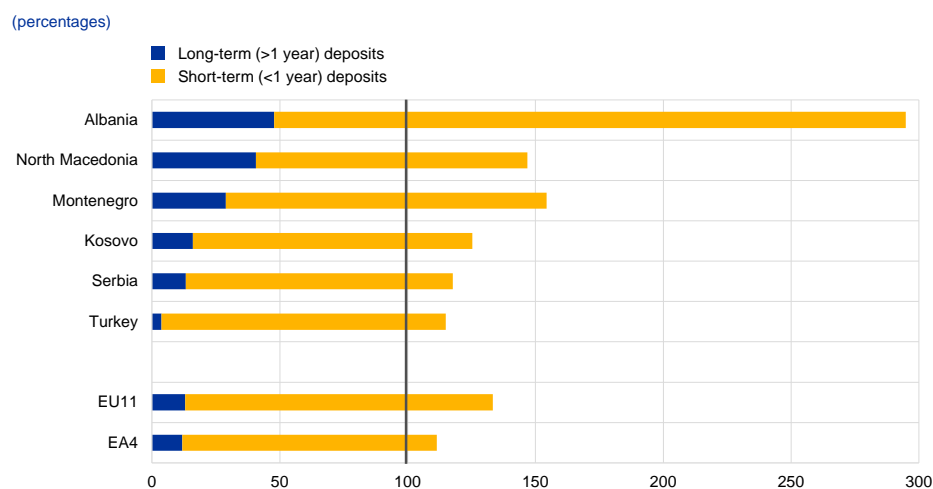
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<sup>41</sup> Of course, long-term loans in the EU (P)Cs, the EU11 or the EA4 may be supported by other, non-deposit, forms of long-term financing, such as the issuance of debt securities of an appropriate maturity or the sourcing of stable external sources of funding. To arrive at a more complete picture about the financial stability risks from maturity mismatches, the characteristics of such liabilities – and of associated assets – would need to be taken into account. Such an analysis, however, is frequently hampered by a lack of sufficient data.

<sup>42</sup> Available evidence about banks' asset and liability duration for some countries in the region shows, however, that some banking sectors may actually benefit from higher interest rates, in part due to the prevalence of variable interest rate loans.

**Chart 14**

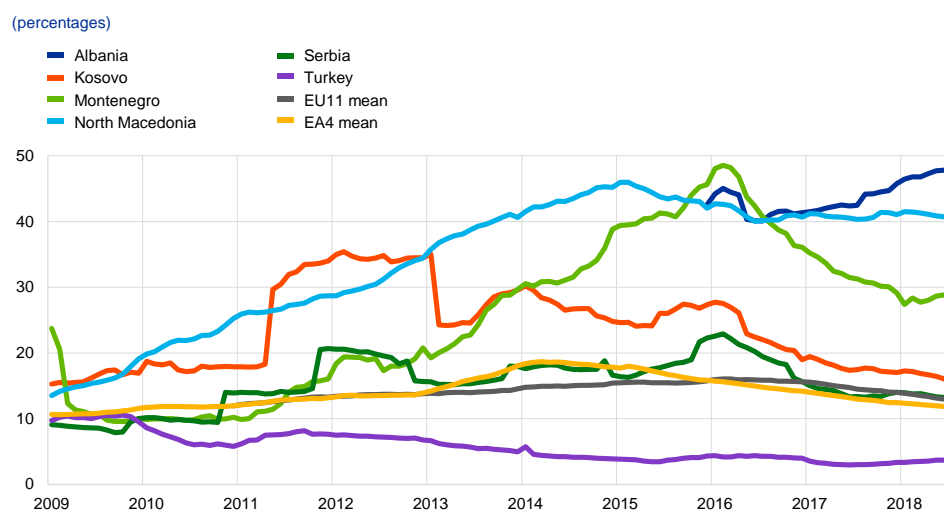
Funding structure of long-term (>1 year) loans



Sources: ECB, national central banks and ECB staff calculations.  
Note: Figures for the EU11 and the EA4 represent averages across individual countries.

**Chart 15**

Share of long-term (>1 year) loans funded by long-term (>1 year) deposits



Sources: ECB, national central banks and ECB staff calculations.  
Note: Figures for the EU11 and the EA4 represent averages across individual countries.

## 7.4 Loan and deposit euroisation as an amplifier of maturity mismatches in EU (potential) candidates

**Across EU (P)Cs, long-term foreign currency loans seem to be less solidly financed than corresponding exposures in domestic currencies.**<sup>43</sup> Overall, the non-financial private sector in the region does not show a universal preference for

<sup>43</sup> Foreign currency loans include both loans denominated in foreign currency as well as loans indexed to foreign currency.

shorter maturities when depositing funds in national currencies with banks, at least in those countries for which data are available (see Table 2). Whereas the share of long-term, domestic currency deposits available to finance local currency loans is rather low in Serbia (5%) and Turkey (1.4%), it is a remarkable 69.7% in Albania and 49.0% in North Macedonia (see Table 2, Column 6). At the same time, banks in EU (P)Cs also appear to be relatively well-hedged against (direct) currency risk, as the share of foreign currency loans in total loans is smaller than the relation of foreign currency deposits to total loans (columns number 1 and 2). Nevertheless, long-term foreign currency loans look insufficiently shielded by equivalent deposits (Columns 3 and 4). In Albania and North Macedonia, a respective 27.9% and 32.3% of long-term foreign currency loans are underpinned by long-term foreign currency deposits (Column 5), much less than for domestic exposures (Column 6). In Serbia and Turkey, the mismatch is even stronger, with coverage of long-term foreign currency loans by corresponding deposits at a mere 16.8% and 6.7% respectively.

**From the viewpoint of resilience to financial stress, a lack of coverage of foreign currency claims by associated foreign currency deposits of comparable maturity might be problematic.** While central banks are able to counter a run on deposits in domestic currencies by providing unlimited emergency liquidity as the lender of last resort, in foreign currencies a central bank's room for manoeuvre is constrained by the stock of its foreign exchange reserves. Although the frequently observed tendency of depositors in EU (P)Cs to switch from domestic into foreign currency deposits at times of crisis may mitigate some of this challenge, a wider loss of confidence in the stability of the banking system triggering a simultaneous withdrawal of (short-term) domestic and foreign currency deposits may entail serious consequences for financial and macroeconomic stability.

**Table 2**  
Cross-currency exposures of banks in EU (P)Cs

(percentages)

	(1)	(2)	(3)	(4)	(5)	(6)
	Share of foreign currency loans and deposits in total loans				Share of long-term deposits in long-term loans	
	All		Long-term		foreign currency	domestic currency
	Loans	Deposits	Loans	Deposits		
<b>Albania</b>	50.7	105.0	37.0	10.3	27.9	69.7
<b>North Macedonia</b>	43.0	51.8	40.0	12.9	32.3	49.0
<b>Serbia</b>	67.7	69.4	59.2	9.9	16.8	5.0
<b>Turkey</b>	33.9	39.9	31.1	2.1	6.7	1.4

Note: As Kosovo and Montenegro do not report a currency breakdown of their bank loans, they are omitted from the table. Similarly, countries in the EU11 and the EA4 do provide a breakdown by currency across maturities only for their bank loans to non-financial corporations, rendering an analysis of maturity mismatches across the entire spectrum of loans and deposits incomplete. Sources: National central banks and ECB staff calculations.

## 7.5 Summary and implications

**When judged against the EA4 or the EU11, banking systems in most EU (P)Cs appear somewhat less vulnerable to possible financial stress from large-scale maturity mismatches.** In general, the business of banks in the region is dominated by providing loans to the non-financial private sector against receiving corresponding deposits. Reliance on other forms of funding, in particular market-based or wholesale debt, is largely absent. At the same time, loan growth in the period from January 2009 to June 2018 has been largely supported by an associated expansion of deposits, leaving, with the notable exception of Turkey, loan-to-deposit ratios at rather comfortable levels. In addition, the share of long-term loans that has been financed by long-term deposits is higher in most EU (P)Cs than in the EU11 or the EA4 and (short and long-term) deposits by the non-financial private sector fully cover related loans in all countries in the region, sometimes to a much larger extent than in the EU11 and the EA4. Lastly, most banking sectors in the region are characterised by sizeable liquidity buffers, providing a cushion in the event of large-scale deposit outflows.

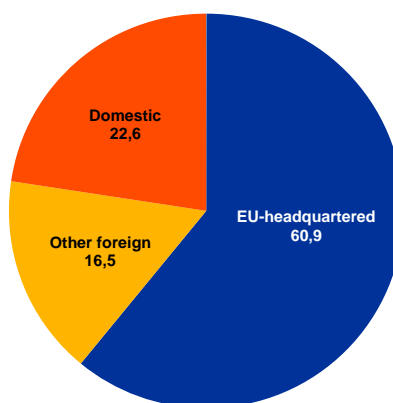
**At the same time, maturity mismatches in EU (P)Cs deserve to be closely monitored, particularly regarding mismatches between foreign currency loans and deposits.** In general, the tendency to fund long-term lending by long-term deposits has declined in some EU (P)Cs in recent years, rendering the maturity structure of liabilities in relation to the composition of assets less favourable than in the past. Furthermore, maturity mismatches appear most problematic in foreign currencies, i.e. in the area where central banks have the least leeway to counter a deposit run by providing emergency liquidity. As a result, regulators/supervisors in EU (P)Cs should closely monitor potential risks emanating from maturity mismatches in the balance sheets of banks in the region, both in the domestic currency and in foreign currencies, including with a view to preparing banks for the liquidity requirements imposed by the Basel III framework, in particular the LCR and the NSFR. In addition, further efforts to strengthen the use of domestic currencies appear warranted as the substantial maturity mismatch between foreign-currency-denominated assets and liabilities in the banking systems of some countries in the region could be a possible flashpoint of future financial stress. Absent successful progress in this regard, central banks in EU (P)Cs should at least ensure a cushion of foreign exchange reserves that is sufficient to meet a sizeable outflow of foreign currency deposits from banks.

## 8 Data appendix

**Chart 16**

Distribution of banking sector assets by geographical origin, Western Balkans

(as a percentage of total banking sector assets, June 2018)

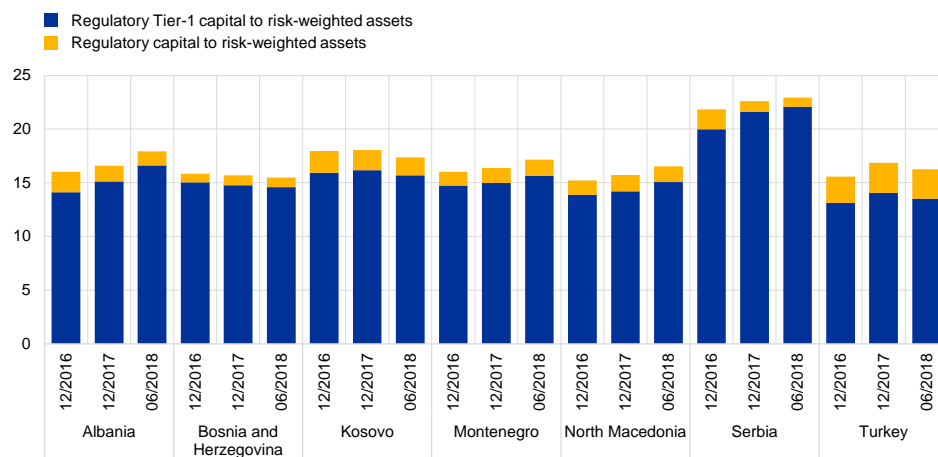


Sources: National authorities and ECB staff calculations.

**Chart 17**

Regulatory capital to risk-weighted assets

(as a percentage)

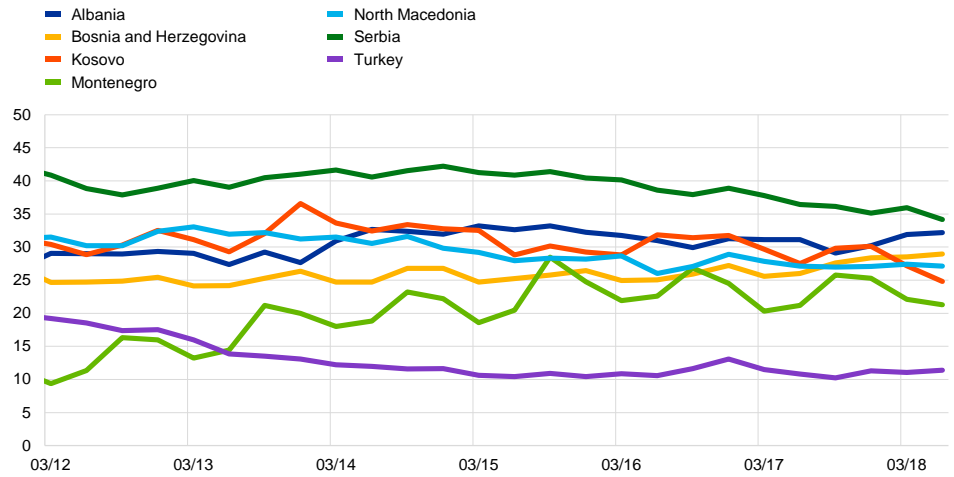


Sources: National authorities and ECB staff calculations.

### Chart 18

#### Liquid assets to total assets

(as a percentage)

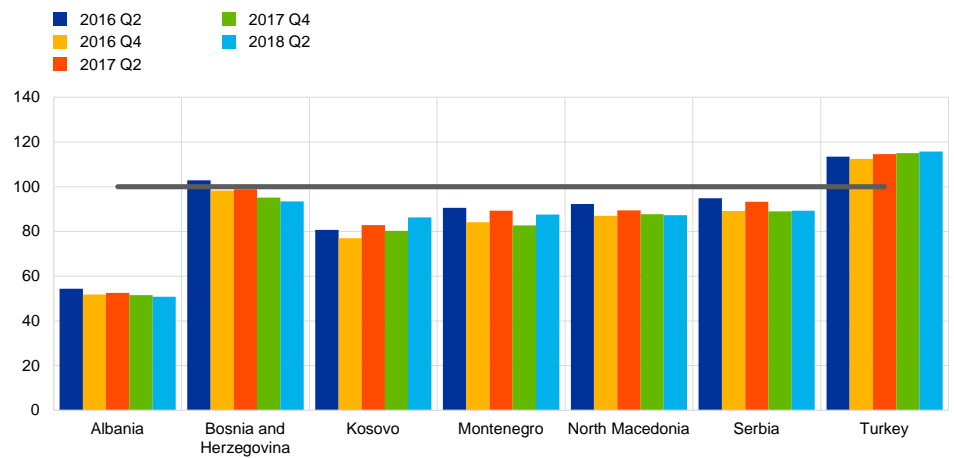


Sources: National authorities and ECB staff calculations.

### Chart 19

#### Loan-to-deposit ratio

(as a percentage)

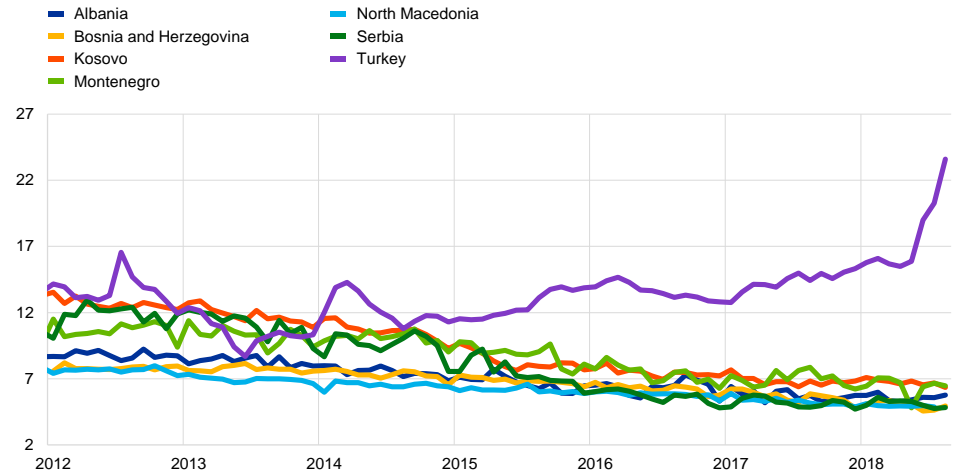


Source: National central banks.

**Chart 20**

**Commercial bank lending rates**

(as a percentage)

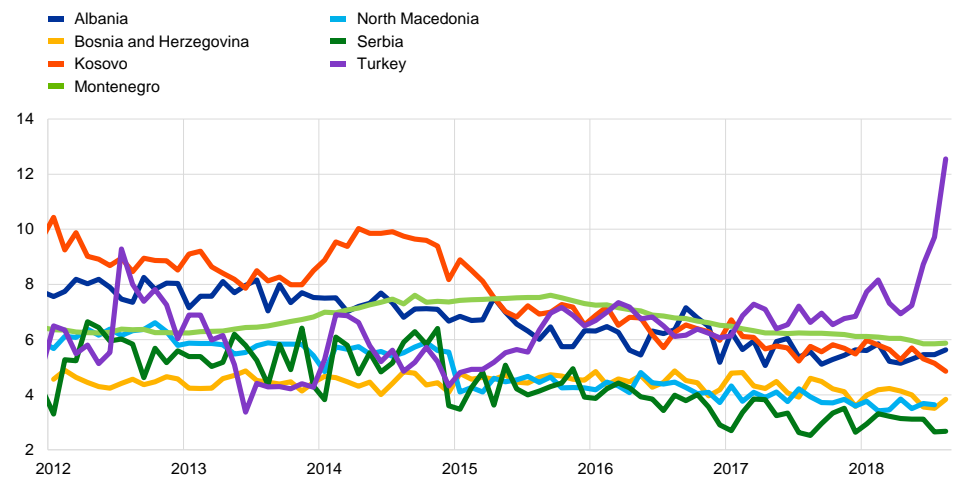


Sources: National authorities and ECB staff calculations.

**Chart 21**

**Spread between lending and deposit rates**

(in percentage points)



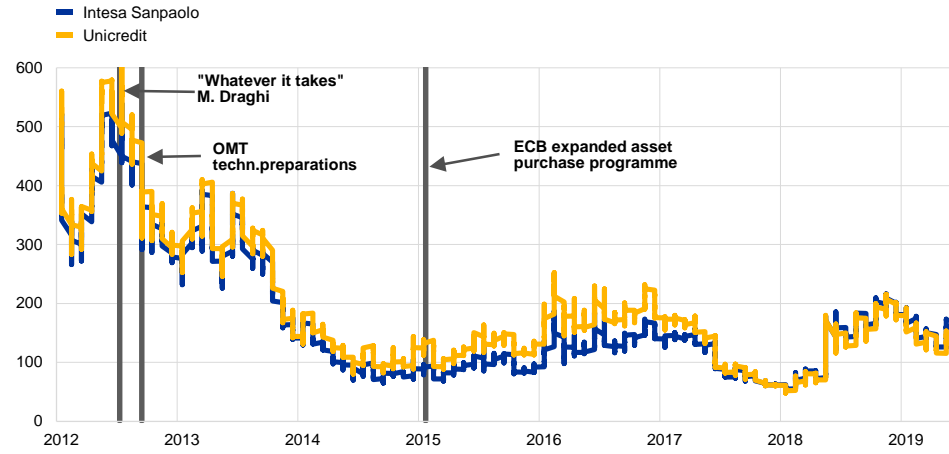
Source: National central banks.



### Chart 22

#### CDS spreads of Italian parent banks

(basis points)

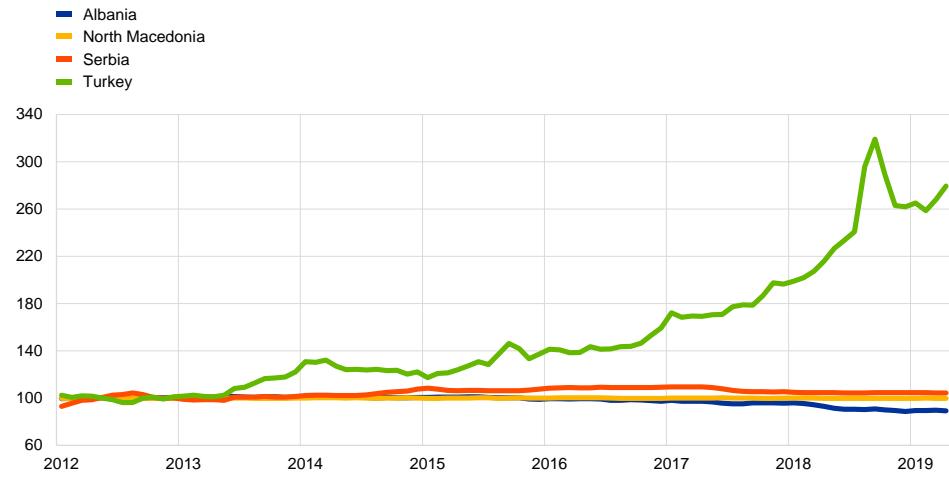


Sources: Bloomberg, Thomson Reuters and ECB staff calculations.

### Chart 23

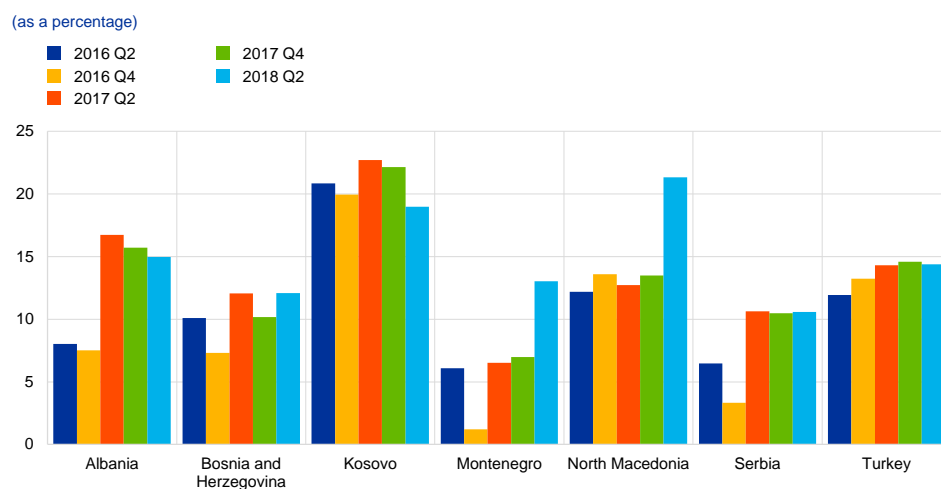
#### Exchange rates

(national currency/euro; index: January 2012 = 100)



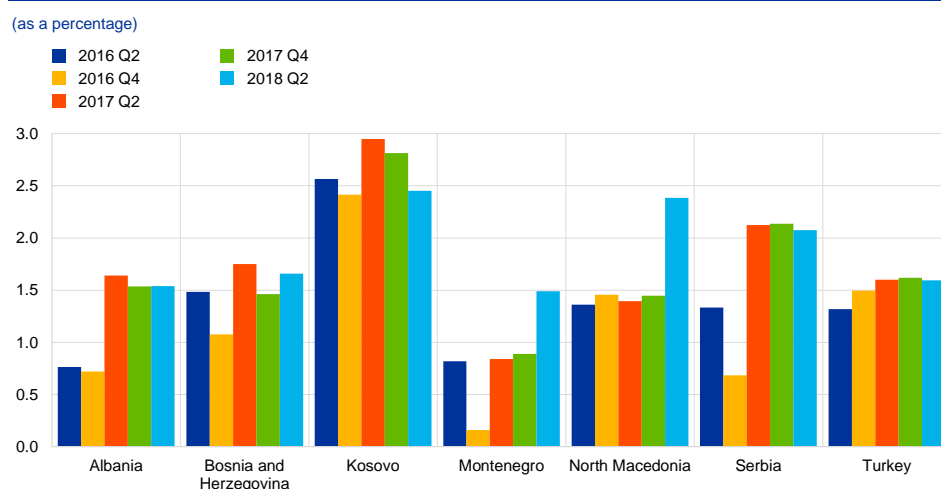
Sources: Haver Analytics, national sources and ECB staff calculations.

**Chart 24**  
Return on equity



Source: National central banks.

**Chart 25**  
Return on assets

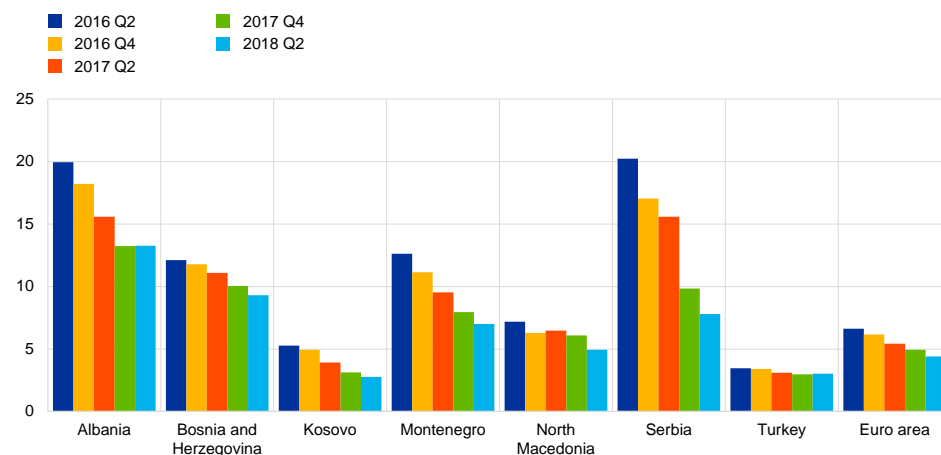


Source: National central banks.

**Chart 26**

Non-performing loans to total loans

(as a percentage)



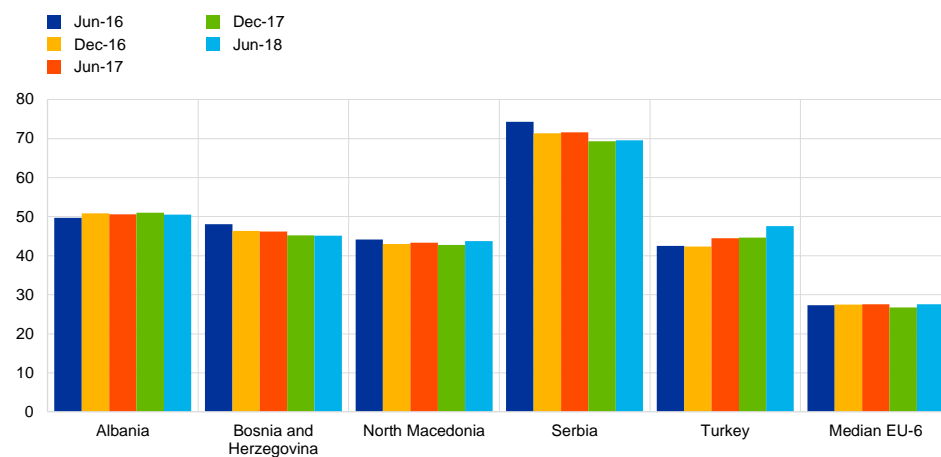
Source: National central banks.

Note: National definitions of NPLs may differ across countries.

**Chart 27**

Private sector forex deposits to total deposits

(as a percentage)



Source: National central banks.

Note: Private sector comprises households and non-financial corporations.

**Table 3**

## Key financial stability indicators in EU candidate countries and potential candidates

(as a percentage)

	Regulatory Tier-1 capital to RWA	Return on assets	Return on equity	Liquid assets to total assets	Liquid assets to short-term liabilities	Interest margins to gross income
<b>Albania</b>						
2017 Q1	14.1	1.6	16.6	31.1	40.5	96.2
2017 Q2	14.6	1.6	16.7	31.1	41.1	96.8
2017 Q3	14.8	1.6	16.3	29.1	38.9	96.0
2017 Q4	15.1	1.5	15.7	30.2	40.8	95.6
2018 Q1	15.6	1.3	13.2	31.9	43.1	110.7
2018 Q2	16.6	1.5	15.0	32.2	43.2	102.8
<b>Bosnia and Herzegovina</b>						
2017 Q1	14.8	2.0	13.6	25.6	41.6	56.4
2017 Q2	15.1	1.7	12.1	26.0	42.1	57.6
2017 Q3	14.9	1.7	11.7	27.6	43.8	58.0
2017 Q4	14.8	1.5	10.2	28.4	44.3	58.3
2018 Q1	14.4	1.7	11.9	28.5	44.1	59.7
2018 Q2	14.6	1.7	12.1	29.0	43.2	58.7
<b>Kosovo</b>						
2017 Q1	16.3	2.6	20.8	29.7	38.7	65.9
2017 Q2	16.2	2.9	22.7	27.5	35.9	64.1
2017 Q3	15.9	2.9	24.1	29.8	38.7	64.8
2017 Q4	16.2	2.8	22.1	30.1	38.2	65.1
2018 Q1	16.2	2.4	18.6	27.2	35.9	67.9
2018 Q2	15.7	2.5	19.0	24.8	33.2	67.9
<b>Montenegro</b>						
2017 Q1	14.5	0.8	6.4	20.3	29.0	57.5
2017 Q2	15.4	0.8	6.5	21.2	29.9	57.8
2017 Q3	15.4	1.0	8.1	25.8	36.5	55.7
2017 Q4	15.0	0.9	7.0	25.3	35.6	54.5
2018 Q1	14.8	1.2	11.3	22.1	29.0	56.7
2018 Q2	15.6	1.5	13.0	21.3	28.0	54.0
<b>North Macedonia<sup>1)</sup></b>						
2017 Q1	14.1	1.5	13.8	27.8	48.9	63.6
2017 Q2	14.5	1.4	12.7	27.2	47.1	62.6
2017 Q3	14.6	1.4	12.6	27.0	47.2	62.4
2017 Q4	14.2	1.4	13.5	27.1	46.9	60.6
2018 Q1	14.8	3.1	28.0	27.4	48.2	56.4
2018 Q2	15.1	2.4	21.3	27.1	47.4	57.5
<b>Serbia</b>						
2017 Q1	20.6	2.3	11.4	37.8	55.0	61.2
2017 Q2	21.3	2.1	10.6	36.5	53.0	61.5
2017 Q3	21.5	2.2	11.0	36.2	52.6	60.9
2017 Q4	21.6	2.1	10.5	35.1	50.9	58.4
2018 Q1	21.8	2.1	10.5	35.9	52.3	63.1
2018 Q2	22.1	2.1	10.6	34.2	48.8	62.7
<b>Turkey</b>						
2017 Q1	13.5	1.6	14.4	11.5 <sup>2)</sup>	19.1 <sup>2)</sup>	67.2
2017 Q2	14.1	1.6	14.3	10.8	18.1	70.0
2017 Q3	14.4	1.6	14.3	10.2	16.7	70.3
2017 Q4	14.1	1.6	14.6	11.3	18.7	71.4
2018 Q1	13.9	1.6	14.2	11.1	18.1	66.5
2018 Q2	13.5	1.6	14.4	11.4	19.2	66.3

	Loan to deposit	NPL net of provisions to regulatory capital	NPL to total gross loans	FX loans to total loans	Net open position in FX to capital
<b>Albania</b>					
2017 Q1	52.4	21.6	17.4	58.5	5.1
2017 Q2	52.5	18.6	15.6	57.1	5.6
2017 Q3	52.4	16.9	14.8	56.4	4.9
2017 Q4	51.6	15.7	13.2	55.7	6.4
2018 Q1	51.8	17.2	13.4	55.2	6.4
2018 Q2	50.8	18.0	13.3	55.7	7.6
<b>Bosnia and Herzegovina</b>					
2017 Q1	98.8	18.0	11.5	60.9	2.3
2017 Q2	98.9	16.8	11.1	60.3	4.3
2017 Q3	96.6	15.9	10.8	59.9	0.8
2017 Q4	95.2	14.4	10.0	60.1	-0.2
2018 Q1	94.4	13.9	9.7	59.8	6.3
2018 Q2	93.4	13.2	9.3	58.9	4.0
<b>Kosovo</b>					
2017 Q1	78.8	1.5	4.5	0.2	1.9
2017 Q2	82.8	1.8	3.9	0.1	2.2
2017 Q3	79.0	1.9	3.6	0.2	1.3
2017 Q4	80.3	1.2	3.1	0.2	1.2
2018 Q1	82.4	1.2	2.9	0.2	1.7
2018 Q2	86.2	1.4	2.8	0.2	1.7
<b>Montenegro</b>					
2017 Q1	87.7	32.8	10.7	6.4	1.9
2017 Q2	89.3	28.6	9.5	5.8	1.8
2017 Q3	86.0	25.6	8.1	5.4	1.5
2017 Q4	82.7	25.9	8.0	6.5	0.9
2018 Q1	84.9	25.1	8.0	6.3	-1.9
2018 Q2	87.5	24.3	7.0	6.3	-1.0
<b>North Macedonia<sup>1)</sup></b>					
2017 Q1	87.6	7.9	6.1	45.3	9.6
2017 Q2	89.4	8.4	6.5	44.7	7.8
2017 Q3	89.3	7.6	6.3	43.5	7.3
2017 Q4	87.7	7.9	6.1	42.5	6.2
2018 Q1	87.2	5.0	4.9	42.8	6.6
2018 Q2	87.3	5.0	4.9	42.7	6.4
<b>Serbia</b>					
2017 Q1	91.6	25.7	16.8	67.8	1.8
2017 Q2	93.2	22.8	15.6	66.7	1.8
2017 Q3	92.1	20.3	12.2	66.5	3.2
2017 Q4	89.0	17.7	9.8	67.5	2.4
2018 Q1	88.3	15.4	9.2	67.3	3.0
2018 Q2	89.3	12.7	7.8	67.0	2.3
<b>Turkey</b>					
2017 Q1	113.8	4.6 <sup>2)</sup>	3.2 <sup>2)</sup>	30.4 <sup>2)</sup>	-0.2
2017 Q2	114.6	4.4	3.1	28.7	0.3
2017 Q3	114.4	4.0	3.0	29.4	0.1
2017 Q4	115.0	4.0	3.0	30.0	0.5
2018 Q1	115.7	4.6	2.9	30.6	2.5
2018 Q2	115.8	5.4	3.0	32.8	0.1

Source: National central banks.

Notes: National definitions of the selected indicators may differ across countries. Figures may differ compared with the last assessment due to data revisions. Foreign currency in the case of Kosovo and Montenegro refers to currencies other than the euro (given their unilateral euroisation regimes).

1) For North Macedonia loans include loans to the financial and non-financial sector.

2) Development and investment banks are excluded.

**Table 4****Banks' holdings of government securities**

(as a percentage of banking system assets)

	2012	2013	2014	2015	2016	2017	2018
<b>Albania</b>	24.7	25.2	25.1	22.3	22.0	22.1	22.5
<b>Bosnia and Herzegovina</b>	1.9	2.1	3.1	4.2	4.8	4.5	n.a.
<b>Kosovo</b>	9.1	11.6	12.0	14.0	14.0	12.6	11.5
<b>Montenegro</b>	2.8	3.2	4.4	8.3	10.5	9.4	9.8
<b>North Macedonia</b>	8.5	10.0	7.9	8.5	7.2	7.2	7.2
<b>Serbia</b>	8.6	10.8	14.6	17.3	19.4	18.3	18.5
<b>Turkey</b>	18.9	14.0	13.0	12.5	11.8	11.4	10.6

Source: National central banks.

**Table 5**

Selected structural features of EU candidate countries' and potential candidates' banking systems

	Number of banks	... of which foreign owned	Share of banking sector assets in financial system assets	Banking sector asset growth (annual change, as a percentage)*	Share of private banking sector assets in banking sector assets
<b>Albania</b>					
2013 Q4	16	14	91.3	3.9	100
2014 Q4	16	14	90.3	4.8	100
2015 Q4	16	13	90.0	1.9	100
2016 Q4	16	13	90.6	6.7	100
2017 Q4	16	13	90.1	2.7	100
2018 Q2	14	13	91.7	0.4	100
<b>Bosnia and Herzegovina</b>					
2013 Q4	27	17	87.1	4.0	98.9
2014 Q4	26	16	87.4	3.4	97.2
2015 Q4	26	16	87.5	4.3	97.4
2016 Q4	23	16	87.8	5.4	97.9
2017 Q4	23	16	88.3	8.9	97.6
2018 Q2	23	16	n.a.	5.5	97.7
<b>Kosovo</b>					
2013 Q4	9	7	72.3	8.1	100
2014 Q4	9	7	70.2	4.2	100
2015 Q4	10	8	69.0	6.2	100
2016 Q4	10	8	67.5	7.4	100
2017 Q4	10	8	65.5	6.4	100
2018 Q2	10	8	64.8	0.6	100
<b>Montenegro</b>					
2013 Q4	11	9	98.8	5.4	100
2014 Q4	12	7	98.8	6.0	100
2015 Q4	14	9	98.6	10.7	100
2016 Q4	15	9	98.6	9.2	100
2017 Q4	15	9	98.6	10.3	100
2018 Q2	15	9	98.5	7.4	100
<b>North Macedonia</b>					
2013 Q4	16	11	87.6	4.7	96.2
2014 Q4	15	11	86.8	8.3	96.2
2015 Q4	15	11	85.8	5.8	96.0
2016 Q4	15	11	84.7	5.0	96.7
2017 Q4	15	11	83.0	3.9	97.3
2018 Q2	15	11	n.a.	2.3	97.6
<b>Serbia</b>					
2013 Q4	30	21	92.4	-1.2	81.2
2014 Q4	29	21	92.0	4.3	80.8
2015 Q4	30	23	91.6	2.7	82.0
2016 Q4	30	22	91.2	6.4	82.7

	Number of banks	... of which foreign owned	Share of banking sector assets in financial system assets	Banking sector asset growth (annual change, as a percentage)*	Share of private banking sector assets in banking sector assets
2017 Q4	29	21	90.7	3.9	83.9
2018 Q2	28	20	90.3	5.4	83.5
<b>Turkey</b>					
2013 Q4	49	23	89.6	26.4	69.2
2014 Q4	51	25	89.3	15.1	68.7
2015 Q4	52	28	89.5	18.2	68.0
2016 Q4	52	28	89.1	15.8	66.2
2017 Q4	51	27	88.9	19.3	64.0
2018 Q2	52	28	89.5	12.7	63.3

Source: National central banks.

Notes: \* Data for the second quarter of 2018 represent the change between the fourth quarter of 2017 and the second quarter of 2018 (not annualised).

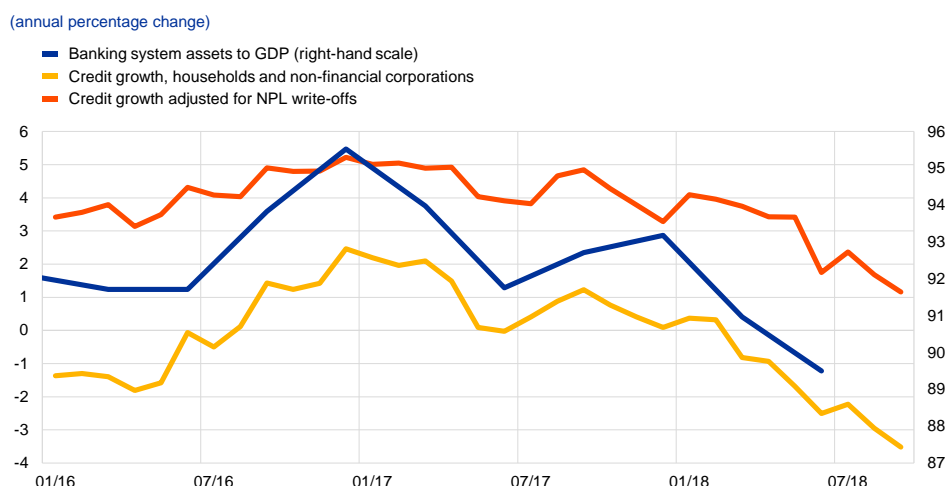


## 9 Country annexes

### 9.1 Albania

**The Albanian banking sector is well capitalised and liquid, and the main risks to financial stability are on a decreasing trend.** Capitalisation and liquidity buffers in the Albanian banking sector are well above regulatory minima and have further increased in the past two years (see Table 6). The lowest loan-to-deposit ratio in the region suggests low funding risks, but at the same time reflects the fact that access to finance is considerably hampered (see below). Profitability has improved in recent years, mainly on account of a decline in loan-loss provisioning associated with NPLs. The main risks to financial stability stem from having the highest NPL level in the region and from the large share of unhedged forex borrowers. However, both have been on a declining trend recently, partly owing to regulatory initiatives.

**Chart 28**  
Lending growth



Source: Bank of Albania.  
Note: Lending series include loans to non-residents.

**Financial intermediation in Albania is low and has further declined.** In a regional comparison, Albania has the lowest loan-to-deposit ratio and the lowest ratio of banking system assets to GDP, with credit growth mostly subdued or even negative for a number of years (see Chart 28). This has been driven by declining lending to non-financial corporations, while lending to households was mostly in positive territory. The subdued rate of credit expansion appears even more striking when taking into account the ongoing economic expansion and favourable financing conditions.

**Credit growth has remained weak, even when excluding NPL write-offs and adjusting for the impact of exchange rate appreciation.** Besides adopting a comprehensive NPL action plan, the authorities also introduced mandatory NPL

write-offs<sup>44</sup> in 2015, which resulted in large-scale write-offs that mechanically reduced outstanding banking sector credit and thus affected the calculation of credit activity.<sup>45</sup> Furthermore, the appreciation of the lek against the euro<sup>46</sup> also led to a mechanic decline in outstanding credit (if measured in lek). However, even when adjusting for NPL write-offs and exchange rate effects, credit growth has remained weak in recent years.

**Evidence suggests that it is mostly supply factors that contribute to anaemic credit growth as banks restrict lending to the corporate sector.** The bank lending survey by the Bank of Albania shows that lending standards for corporates (both SMEs and large enterprises) have almost constantly tightened since the beginning of 2016, while the demand for loans has increased in most quarters.<sup>47</sup>

**Gradual deleveraging by foreign-owned banks might have contributed to lower banking sector competition.** Albania's banking sector has traditionally been dominated by foreign-owned banks. However, in recent years domestic banks have expanded their portfolio, while the loan portfolio of foreign-owned banks has declined owing to gradual deleveraging and the sales of the subsidiaries of Crédit Agricole and NBG bank to domestic owners. As a result, the distribution of both asset shares and lending shares shifted somewhat, with the market share of domestically-owned banks expanding to approximately one-quarter of total lending. The gradual deleveraging of foreign-owned banks might have had an adverse effect on competition in the banking sector, which in turn could have negatively affected access to finance for corporates.

**Until recently, parent banks operating in Albania indicated low market potential, which might be related to high NPLs and weaknesses in institutional quality and the legal environment.** Until April 2017, the majority of parent banks indicated the market potential in Albania to be low (in contrast to most other Western Balkan countries).<sup>48</sup> The relative unattractiveness of the Albanian banking system might be driven by the high level of NPLs, as suggested by the bank lending survey of the Bank of Albania, which cites borrower creditworthiness as one of the main factors that contributed to a tightening of credit standards. Furthermore, weaknesses in the rule of law and an elevated level of corruption might increase banks' reluctance to lend, as under such circumstances the execution of collateral might be hampered, leading to higher borrowing costs to account for the increased risk as well as high collateral requirements.<sup>49</sup> Therefore, the efforts of national authorities to improve on this are welcome.

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<sup>44</sup> For NPLs that were in the loss category for more than three years.

<sup>45</sup> Overall, between the beginning of 2015 and September 2018, loans of approximately €580 million were written off.

<sup>46</sup> Since October 2015, the exchange rate of the lek has gained broadly 10% against the euro.

<sup>47</sup> See Graph 1 and Graph 5 in [Bank Lending Survey of the Bank of Albania](#), for the third quarter of 2018.

<sup>48</sup> According to the EIB [CESEE Bank Lending Survey – H2-2018](#).

<sup>49</sup> For a discussion on access to finance in the Western Balkans, including Albania, see Moder and Bonifai (2017), "[Access to finance in the Western Balkans](#)", *ECB Occasional Paper Series*, No 197.

**Table 6**

## Albania: Financial soundness indicators

(percentages)	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Regulatory capital to risk-weighted assets	16.0	16.0	16.1	15.6	16.0	15.8	16.3	16.4	16.6	16.9	17.9
Regulatory Tier-1 capital to risk-weighted assets	13.7	13.8	14.0	13.7	14.1	14.1	14.6	14.8	15.1	15.6	16.6
Common Equity Tier 1 capital (CET1) to risk-weighted assets	13.7	13.6	13.7	13.7	14.1	14.1	14.7	14.8	15.5	15.5	16.6
NPLs net of provisions to regulatory capital	24.3	27.1	30.4	32.0	23.1	21.6	18.6	16.9	15.7	17.2	18.0
NPLs to total gross loans	18.2	19.3	20.0	21.3	18.2	17.4	15.6	14.8	13.2	13.4	13.3
... of which in FX (NPLs in FX to total NPLs)	67.7	68.7	68.3	66.8	69.1	68.5	64.7	64.2	62.7	61.4	60.2
Households: NPLs to total gross loans to households	13.3	13.2	12.0	12.0	10.2	9.9	9.4	8.5	7.6	7.5	7.5
Non-financial corporations: NPLs to total gross loans to non-financial corporations	21.4	23.1	24.4	26.7	23.0	21.9	19.5	18.8	17.1	17.5	17.1
Return on assets	1.2	0.4	0.8	0.7	0.7	1.6	1.6	1.6	1.5	1.3	1.5
Return on equity	13.2	4.5	8.0	6.8	7.5	16.6	16.7	16.3	15.7	13.2	15.0
Liquid assets to total assets	32.3	31.8	31.0	29.9	31.3	31.1	31.1	29.1	30.2	31.9	32.2
Liquid assets to short-term liabilities	41.4	40.7	40.0	38.6	40.6	40.5	41.1	38.9	40.8	43.1	43.2
Net open position in foreign exchange to regulatory capital	7.7	6.1	8.4	8.2	7.0	5.1	5.6	4.9	6.4	6.4	7.6
Interest margins to gross income	87.8	90.4	83.9	81.6	83.3	96.2	96.8	96.0	95.6	110.7	102.8
Cost-to-income	59.9	60.8	59.1	58.5	61.2	67.7	69.3	70.0	71.9	81.1	77.3
Non-interest expenses to gross income	59.9	60.8	59.1	58.5	61.2	67.7	69.3	70.0	71.9	81.1	77.3
Foreign-currency-denominated loans to foreign-currency-denominated deposits	63.1	62.2	63.2	60.0	57.6	57.6	57.0	55.9	55.0	54.7	54.6
Foreign-currency-denominated loans to total loans	60.8	60.6	60.1	59.5	58.6	58.5	57.1	56.4	55.7	55.2	55.7
Foreign-currency-denominated liabilities to total liabilities	57.0	57.5	57.6	54.8	54.6	55.1	54.5	52.1	51.8	51.8	51.7
Household debt to gross domestic product	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Residential real estate prices (percentage change/last 12 months)	-2.9	12.0	5.9	-0.1	5.9	-3.6	-9.7	-1.2	0.4	-1.2	-0.3
Loan-to-deposit ratio	53.3	53.1	54.3	53.3	51.9	52.4	52.5	52.4	51.6	51.8	50.8
Loan-to-value ratios for housing loans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ratio of external liabilities to total liabilities of banks	6.8	6.9	6.9	6.8	6.8	6.8	6.7	6.8	6.8	6.6	6.8

Notes: Non-performing loans cover those loans that are classified in the last three categories of credits classification: sub-standard, doubtful and loss. Their gross amount (principal + interest) is the total of non-performing loans. Non-interest expenses to gross income covers administrative expenses to net interest and non-interest income.

Source: Bank of Albania.

## 9.2 Bosnia and Herzegovina

**The banking sector in Bosnia and Herzegovina appears adequately capitalised and liquid overall.** Capitalisation in the banking sector as a whole was adequate as the ratio of regulatory capital to risk-weighted assets stood at 15.5% in the second quarter of 2018, above the legal minimum of 12%. Liquidity in the system has been improving as the loan-to-deposit ratio gradually decreased to 93.4% in the second quarter of 2018. However, despite this it remains one of the highest in the region. Moreover, a fragmented market and high regulatory costs have been hampering profitability<sup>50</sup>, which has been picking up but remains modest, with a return on average equity at 12.1% in the second quarter of 2018. The total number of banks operating in Bosnia and Herzegovina remains remarkably high relative to peer countries, standing at 23 in the second quarter of 2018. Coupled with the fact that small domestically-owned banks are generally more vulnerable to headwinds<sup>51</sup>, this is a sign that there is room for consolidation.

**The regulatory framework has improved somewhat in recent years under EU and IMF guidance, though it is still hampered by a lack of effective coordination between the country's two autonomous entities.** Furthermore, despite the adoption in 2017 of banking laws and amendments to the banking agency laws, which have strengthened the supervisory powers of banking agencies and introduced a modern bank resolution framework, amendments to the Law on Deposit Insurance remain outstanding; therefore, the deposit insurance fund cannot be used for resolution purposes. Finally, the lack of a bank lending survey and the only partial availability of consolidated data makes proper analysis of potential risks difficult.

**Credit growth to the private sector has been gradually picking up, after a period of low demand for new loans, while banks continue to engage in balance sheet repair.** The non-financial resident loan portfolio is almost equally distributed between loans to households (47%) and loans to enterprises (44%), with the remainder being exposure to the public sector. After a steady improvement over the previous three years, corporate loans' annual growth started slowing in 2018 against the backdrop of increased political uncertainty ahead of the 2018 elections. The continued appetite for household loans has been fuelled by rising employment and wages as the pace of economic activity gathered momentum. The share of general purpose loans has been increasing steadily over the past decade, from 33% in 2010 to over 75% of total loans to households in the second quarter of 2018, constituting the bulk of household loans. Such loans, having a weaker quality of collateral, raise concern over future serviceability and the possibility of debt collection. The share of outstanding forex loans in total loans has remained high, amounting to 58.9% in the second quarter of 2018.

**Asset quality improved, with the NPL ratio declining to 9.3% in the second quarter of 2018 from a high of 16% in 2014.** Importantly, the ratio of NPLs net of provisions to capital in the period under review decreased to one-third of their peak value and amounted to

<sup>50</sup> See [IMF's Bosnia and Herzegovina: 2017 Article IV Consultation](#), February 2018.

<sup>51</sup> See [2017 Financial Stability Report](#), Central Bank of Bosnia and Herzegovina.

**Table 7**

## Bosnia and Herzegovina: Financial soundness indicators

(percentages)	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Regulatory capital to risk-weighted assets	14.9	14.9	15.8	16.1	15.8	15.7	15.9	15.6	15.7	15.4	15.5
Regulatory Tier-1 capital to risk-weighted assets	13.8	13.9	14.8	15.1	15.0	14.8	15.1	14.9	14.8	14.4	14.6
Common Equity Tier 1 capital (CET1) to risk-weighted assets	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NPLs net of provisions to regulatory capital	26.9	24.6	20.3	20.3	18.5	18.0	16.8	15.9	14.4	13.9	13.2
NPLs to total gross loans	13.7	13.2	12.1	12.1	11.8	11.5	11.1	10.8	10.0	9.7	9.3
... of which in FX (NPLs in FX to total NPLs)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Households: NPLs to total gross loans to households	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-financial corporations: NPLs to total gross loans to non-financial corporations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Return on assets	0.3	1.6	1.5	1.2	1.1	2.0	1.7	1.7	1.5	1.7	1.7
Return on equity	2.0	11.1	10.1	8.4	7.3	13.6	12.1	11.7	10.2	11.9	12.1
Liquid assets to total assets	26.5	25.0	25.1	25.9	27.2	25.6	26.0	27.6	28.4	28.5	29.0
Liquid assets to short-term liabilities	44.0	41.6	41.5	42.8	44.1	41.6	42.1	43.8	44.3	44.1	43.2
Net open position in foreign exchange to regulatory capital	9.0	5.0	-4.5	0.1	1.7	2.3	4.3	0.8	-0.2	6.3	4.0
Interest margins to gross income	62.0	61.6	60.9	61.4	60.4	56.4	57.6	58.0	58.3	59.7	58.7
Cost-to-income	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-interest expenses to gross income	94.5	70.6	73.2	77.3	80.7	65.8	69.0	69.4	73.3	67.1	67.4
Foreign-currency-denominated loans to foreign-currency-denominated deposits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Foreign-currency-denominated loans to total loans	60.8	59.8	57.7	63.2	62.6	60.9	60.3	59.9	60.1	59.8	58.9
Foreign-currency-denominated liabilities to total liabilities	60.3	59.6	59.3	57.8	57.4	56.7	56.0	55.7	55.1	54.3	54.9
Household debt to gross domestic product	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Residential real estate prices (percentage change/last 12 months)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Loan-to-deposit ratio	103.2	103.6	102.8	100.4	98.3	98.8	98.9	96.6	95.2	94.4	93.4
Loan-to-value ratios for housing loans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ratio of external liabilities to total liabilities of banks	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Central Bank of Bosnia and Herzegovina.

Note: Non-performing loans cover the three last categories of credit classification, i.e. sub-standard (principal or interest is between 90 and 180 days overdue), doubtful (principal or interest is between 180 and 270 days overdue) and loss (principal or interest is 270 days or more overdue).

13.2% in the second quarter of 2018, suggesting that the system's ability to cope with unexpected shocks has improved substantially. This decline is partly attributed to a

series of liquidations and mergers<sup>52</sup> and is also the result of continuous write-offs. Nevertheless, current GDP growth rates of around 3% are considered too low to bring NPL ratios back to their pre-crisis level within three years.<sup>53</sup>

**Further development of the local capital market is crucial in facilitating privatisation, enhancing transparency and reducing dependency on external financing.** The local bond market is dominated by government bonds, which are mainly held by the banking sector. Although Bosnia and Herzegovina is under an IMF-supported programme, previous tranche payments have been substantially delayed due to the slow implementation of key policies. Authorities have therefore resorted to increased debt issuance in domestic markets to bridge the financing shortfall which resulted in an increase in banks' exposure to government bonds.

## 9.3 Kosovo

**The banking sector in Kosovo exhibits comfortable profitability, liquidity and capital ratios, although most ratios decreased in the period under review.** The sector has ample buffers with regulatory capital to risk-weighted assets and liquid assets to short-term liabilities above regulatory minima. Bank profitability remained high in the period under review, mirrored in a return on average equity ratio of 19% in the second quarter of 2018, albeit down by 10 percentage points compared with the peak levels observed in 2015 (see Table 8). Higher lending volumes and increasing non-interest incomes have partially compensated for lower income resulting from decreasing lending interest rates. Funding risks appear contained since banks mainly rely on domestic deposits. The sector remained liquid overall, with a loan-to-deposit ratio averaging around 82% between 2017 and mid-2018.

**Lending activity was vigorous during the period under review, yet credit risk remains one of the main challenges to financial stability.** Private sector credit edged up by 11% on average in the year until September 2018, spurred by lower interest rates, decreasing requirements for collateral, competition among commercial banks, continuously ample liquidity in the banking sector and improved portfolio quality. Household lending was particularly dynamic in the period under review, although the pace has slowed compared with 2016. New lending to enterprises rebounded in 2017 and up until mid-2018, and construction loans in particular experienced a major pick-up. Other sectors such as agriculture and trade (the latter accounting for more than 50% of the total stock of loans to corporates) also experienced strong increases in lending, partially relating to the launch of the Kosovo Credit Guarantee Fund. Regulatory and judiciary challenges continue to weigh on lending activity through lengthy contract enforcement procedures, weak property rights and poor quality of financial reporting. Nevertheless, the ratio of non-performing loans to total loans (standing at 2.8% in June 2018) also remains low in a regional context and continued to decrease in the period under review. This reduction was

<sup>52</sup> In 2014 and 2016, two banks in one of the two entities – Republika Srpska – were liquidated, while two small domestically-owned banks were merged with two other banks.

<sup>53</sup> See Chapter 3, "Banking sectors in the Western Balkans: Prospects and Challenges", [Regional Economic Issues](#), IMF, November 2017.

partially driven by improved asset quality, favourable economic conditions and accelerated lending. However, the bulk of the decline appears to stem from accelerated write-offs, following amendments to the Regulation on Credit Risk Management, which led to a decrease in the overall stock of non-performing loans. While credit growth has benefited from a favourable economic growth environment and eased supply conditions, adverse macroeconomic scenarios could impinge on credit quality. Moreover, although space remains to increase financial intermediation in the economy, it is important that lending is channelled into production and tradable sectors rather than fuelling consumer loans and real estate activity.

**The low interest rate environment and longer maturity in lending have led to increasing maturity mismatches between loans and deposits, hence raising concerns about potential liquidity risks for banks going forward.** The low interest rate environment has, in particular, led households in Kosovo to shift their deposits to shorter-term maturities. At the same time, banks are increasingly lending at longer-term maturity, which has resulted in increased maturity mismatches of assets and liabilities (see special feature, Section 7), which is also mirrored in the decreasing ratio of liquid assets to short-term liabilities. In an overall stable banking sector, these developments are particularly noticeable and could raise concerns about banks' liquidity management going forward as well as possible changes to banks' income structure if these developments are sustained.

**In an environment where banks have continuously been reducing their holdings of government securities in favour of lending, the central bank remains one of the main actors on the secondary market, holding just below 30% of the stock of debt.** The central bank has purchased government debt from domestic commercial banks as part of its investment policy and sees these transactions as a contribution to overall secondary market liquidity by ensuring that there is an active trading party. Through purchases of government bonds and bills, the central bank claims to have increased activity in the securities market, provided the necessary liquidity and enhanced competition between dealers, which has ultimately lowered interest rates and, consequently, the cost of finance for the Government.

**Table 8**

## Kosovo: Financial soundness indicators

(percentages)	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
<b>Regulatory capital to risk-weighted assets</b>	19.0	19.7	18.7	18.3	17.9	18.3	18.1	17.8	18.1	18.1	17.4
<b>Regulatory Tier-1 capital to risk-weighted assets</b>	16.7	17.3	16.4	16.1	15.9	16.3	16.2	15.9	16.2	16.2	15.7
<b>Common Equity Tier 1 capital (CET1) to risk-weighted assets</b>	n.a.	18.4	17.2	17.1	16.8	17.1	17.1	16.8	17.0	17.3	16.5
<b>NPLs net of provisions to regulatory capital</b>	3.0	2.8	2.7	2.6	2.2	1.5	1.8	1.9	1.2	1.2	1.4
<b>NPLs to total gross loans</b>	6.2	5.9	5.3	5.1	4.9	4.5	3.9	3.6	3.1	2.9	2.8
<b>Households: NPLs to total gross loans to households</b>	2.6	2.7	2.5	2.5	2.5	2.4	1.9	1.5	1.3	1.2	1.2
<b>Non-financial corporations: NPLs to total gross loans to non-financial corporations</b>	7.9	6.7	6.0	5.6	5.5	5.7	5.0	4.8	4.1	3.9	3.6
<b>Return on assets</b>	2.5	3.3	2.6	2.7	2.4	2.6	2.9	2.9	2.8	2.4	2.5
<b>Return on equity</b>	21.6	27.4	20.8	22.4	19.9	20.8	22.7	24.1	22.1	18.6	19.0
<b>Liquid assets to total assets</b>	29.2	28.8	31.9	31.4	31.7	29.7	27.5	29.8	30.1	27.2	24.8
<b>Liquid assets to short-term liabilities</b>	37.3	37.0	41.3	40.9	41.5	38.7	35.9	38.7	38.2	35.9	33.2
<b>Net open position in foreign exchange to regulatory capital</b>	1.8	0.9	1.7	2.0	4.4	1.9	2.2	1.3	1.2	1.7	1.7
<b>Interest margins to gross income</b>	75.8	74.0	74.4	68.1	68.1	65.9	64.1	64.8	65.1	67.9	67.9
<b>Cost-to-income</b>	60.3	70.8	66.8	65.0	67.3	63.2	61.9	61.9	64.6	68.1	65.6
<b>Non-interest expenses to gross income</b>	51.6	64.6	47.1	46.7	49.6	47.1	44.4	43.0	45.3	49.2	48.0
<b>Foreign-currency-denominated loans to foreign-currency-denominated deposits</b>	4.7	4.5	3.3	3.1	3.3	2.9	2.6	3.5	3.6	3.2	3.2
<b>Foreign-currency-denominated loans to total loans</b>	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
<b>Foreign-currency-denominated liabilities to total liabilities</b>	3.7	4.4	4.5	4.6	4.1	4.2	4.4	4.5	3.9	4.6	4.7
<b>Household debt to gross domestic product</b>	12.9	13.1	13.9	14.2	14.3	14.5	15.1	15.2	15.4	15.6	16.2
<b>Residential real estate prices (percentage change/last 12 months)</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Loan-to-deposit ratio</b>	74.7	77.7	80.7	78.3	77.0	78.8	82.8	79.0	80.3	82.4	86.2
<b>Loan-to-value ratios for housing loans</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35.5	40.1
<b>Ratio of external liabilities to total liabilities of banks</b>	6.0	6.1	6.4	6.0	4.9	5.4	5.8	5.1	5.8	5.9	5.8

Source: Central Bank of the Republic of Kosovo.

Note: Non-performing loans cover loans having delinquency or default in excess of 90 days, which are classified in the categories of doubtful and loss.

1) There is a methodological brake in the calculation of NPLs by sector as of the second quarter of 2016 whereby off-balance sheet items are included in the breakdown of loans by sector and classification.



## 9.4 Montenegro

**The Montenegrin banking system is stable overall and risks have been on the decline, but challenges remain, in particular relating to asset quality and profitability.**

Capitalisation in the banking sector remains sound, as indicated by regulatory capital to risk-weighted assets ratio of 17.2% in the second quarter of 2018, which is well above the regulatory minimum of 10%. However, aggregate profitability remains modest due to competition in a banking sector formed by small banks, which tend to have a low/negative return on equity.<sup>54</sup> However, banks' profitability showed some signs of recovery, with a return on equity at 13% in the second half of 2018.<sup>55</sup> At the same time, profitability may be affected by relatively low growth in credit to corporates (4.8% in the second quarter of 2018 with respect to the same quarter of 2017) compared to household loans (almost 10%), which could be improved by implementing a more efficient legal framework and further NPL reduction. In this regard, the Central Bank of Montenegro (CBM) expects an easing of lending standards for SMEs in the coming months, largely owing to competition in the sector and increased willingness to take risks.<sup>56</sup>

**The banking system seems crowded and the competition among banks quite high, since 15 banks are operating in a very small economy.**<sup>57</sup>

A smaller set of more profitable banks could instead be supervised more closely and might result in a stronger system overall.<sup>58</sup> Limiting new licences and increasing minimum capital requirements for banks might facilitate consolidation. Another possible source of risk concerns some small domestic banks that did not provide information to a qualified audit or used non-standard accounting procedures (included as a condition for the World Bank programme).<sup>59</sup> The risk for financial stability in the case of their resolution has to be taken into account. Indeed, even if they are not systemic, some negative confidence or spillover effects cannot be excluded.<sup>60</sup> Another potential risk for the banking sector is the exposure of banks to the sovereign. While the level is still moderate, this has to be seen in the context of the significant fiscal challenges the country is facing.

**The NPL ratio was reduced significantly in recent years from around 25% in 2011 to 7% of total gross loans (excluding interest due and accrued interest and fees) in the second quarter of 2018, supported by improved voluntary financial**

<sup>54</sup> See the IMF's [Montenegro: Article IV Consultation](#) (May 2018).

<sup>55</sup> 12 out of the 15 banks operating in the country recorded a net profit in 2018. This increase in profitability is due to a drop in allowances/expenses for provisioning and impairment. There may be several reasons for that: improved loan quality, creation of more conservative provisions/reserves for NPLs in the last year and change in accounting standards (from IAS 39 to the new IFRS 9).

<sup>56</sup> See [Report on Survey on Banks' Lending Activity for the second quarter of 2018](#).

<sup>57</sup> Only three small banks are currently owned by non-EU shareholders (from Serbia, Turkey and Ukraine). The Turkish and Ukrainian bank got their licenses in 2015, while the Serbian bank has been operating in the country since the beginning.

<sup>58</sup> See also the IMF's [Montenegro: Article IV Consultation](#) (May 2018).

<sup>59</sup> The Financial Sector Resilience pillar aims to support enhancement of the NPL resolution framework, addressing vulnerabilities stemming from banks with qualified audit reports, expanding the financial sector supervisory framework, and enhancing the independence of the CBM.

<sup>60</sup> These banks hold less than 18% of total assets. See World Bank, [Montenegro - First Fiscal and Financial Sector Resilience Policy Based Guarantee](#), 2017. The CBM has also taken provisional management over two banks (locally-owned with market share around 6%) after audit results showed that the capital of the two lenders did not comply with the minimum risk requirements.

**restructuring rules.**<sup>61</sup> The reduction in NPLs was mainly due to the transfer to bank-owned factoring companies. This continues to contribute to higher credit risk and interest rates, and has not solved the problem of high corporate debt. Factoring companies were incorporated into the scope of CBM supervision in late 2017, allowing possible further actions on NPLs held outside the banking sector.<sup>62</sup> A comprehensive law covering non-banking activities was enacted in October 2017<sup>63</sup> to regulate provisioning of factoring services, purchase of receivables, and leasing and credit guarantee operations.<sup>64</sup> In general, a holistic approach to resolve NPLs tackling underlying structural issues is still missing, with only the CBM taking measures. Since 2013, banks should develop a comprehensive strategy for dealing with NPLs for a period of three years and determine annual operating objectives relating to reducing the level.<sup>65</sup> The NPL definition in Montenegro also allows banks to classify assets on the basis of the underlying collateral rather than the borrowers' ability to repay.<sup>66</sup> Based on the recommendations of the Financial Sector Assessment Programme, the CBM intends to amend NPL regulations by end of 2018, with an additional six month period left for full application.<sup>67</sup>

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<sup>61</sup> See [Montenegro country snapshot](#) by the World Bank (April 2018).

<sup>62</sup> The Law on Voluntary Financial Restructuring in line with the "Podgorica approach" has been extended to May 2019 and, in June 2017, the Parliament adopted amendments to broaden coverage of assets under restructuring and increase incentives to participate (e.g. a fast-track procedure to confirm pre-packaged workout plans, lower administrative costs, tax incentives, revised disclosure requirements).

<sup>63</sup> For more details, see: "Law on Financial Leasing, Factoring, Purchase of Receivables, Micro-Lending and Credit-Guarantee Operations", *Official Gazette of Montenegro*, No 73/17.

<sup>64</sup> This is essential as factoring grew rapidly in recent years and is expected to improve legal clarity and legal certainty for non-bank financial services, make the provision of services on the supply side and the protection of consumers' rights on the demand side more efficient, and enhance the supervisory and regulatory role of the Central Bank. For more details, see the Vienna Initiative's "[NPL Monitor for the CESEE region – H1 2018](#)".

<sup>65</sup> See Decision on Minimum Standards for Credit Risk Management in Banks, *Official Gazette of Montenegro*, No 22/12, 55/12, 57/13, 44/17, 82/17).

<sup>66</sup> See the IMF's "[Montenegro: Article IV Consultation](#)" (May 2018) and Jaeger et al. (2016) "[Montenegro – Financial sector assessment program: framework for non-performing loans workout and insolvency and creditor rights – technical note](#)".

<sup>67</sup> According to the Montenegrin Banking Supervision, which had run simulations as of the third quarter of 2018, the effect on both capital adequacy and the stock of NPL is not expected to be substantial as the banks have not been making significant use of that regulatory possibility.

**Table 9****Montenegro: Financial soundness indicators**

(percentages)	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
Regulatory capital to risk-weighted assets	15.5	15.7	16.7	16.3	16.0	15.8	16.6	16.8	16.4	16.2	17.2
Regulatory Tier-1 capital to risk-weighted assets	14.2	14.5	15.5	15.2	14.8	14.5	15.4	15.4	15.0	14.8	15.6
Common Equity Tier 1 capital (CET1) to risk-weighted assets	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NPLs net of provisions to regulatory capital	42.6	39.2	37.1	33.5	32.8	32.8	28.6	25.6	25.9	25.1	24.3
NPLs to total gross loans	13.4	12.9	12.6	11.0	11.1	10.7	9.5	8.1	8.0	8.0	7.0
Households: NPLs to total gross loans to households	8.2	7.9	7.7	7.3	6.5	6.7	6.4	5.6	5.2	4.7	4.6
Non-financial corporations: NPLs to total gross loans to non-financial corporations	24.1	22.5	21.3	20.8	19.8	18.2	16.5	14.7	14.5	13.3	13.2
Return on assets	-0.1	0.8	0.8	0.9	0.2	0.8	0.8	1.0	0.9	1.2	1.5
Return on equity	-0.9	5.7	6.1	6.6	1.2	6.4	6.5	8.1	7.0	11.3	13.0
Liquid assets to total assets	24.8	21.9	22.6	26.8	24.5	20.3	21.2	25.8	25.3	22.1	21.3
Liquid assets to short-term liabilities	40.1	32.8	34.4	38.6	34.8	29.0	29.9	36.5	35.6	29.0	28.0
Net open position in foreign exchange to regulatory capital	2.3	4.1	2.9	2.6	1.7	1.9	1.8	1.5	0.9	-1.9	-1.0
Interest margins to gross income	58.7	62.9	60.0	59.2	58.6	57.5	57.8	55.7	54.5	56.7	54.0
Cost-to-income											
Non-interest expenses to gross income	81.4	75.0	73.0	73.5	76.6	70.3	70.7	71.6	73.0	74.0	70.8
Foreign-currency-denominated loans to foreign-currency-denominated deposits	103.6	95.9	78.2	75.7	78.2	82.2	79.7	74.5	75.4	71.9	71.9
Foreign-currency-denominated loans to total loans	7.9	7.8	6.1	5.5	6.2	6.4	5.8	5.4	6.5	6.3	6.3
Foreign-currency-denominated liabilities to total liabilities	6.9	7.1	6.7	6.2	6.4	6.0	5.9	5.8	6.5	6.9	7.0
Household debt to gross domestic product	25.2	23.7	24.4	25.3	25.7	24.7	25.5	26.1	26.5	26.0	27.0
Residential real estate prices (percentage change/last 12 months)	n.a.	56.8	60.1	53.9	54.1	53.1	56.0	54.2	55.4	n.a.	62.0
Loan-to-deposit ratio	90.9	91.0	90.5	87.8	84.1	87.7	89.3	86.0	82.7	84.9	87.5
Loan-to-value ratios for housing loans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ratio of external liabilities to total liabilities of banks	24.7	25.2	24.7	23.3	24.8	25.4	25.8	23.1	23.5	24.0	25.0

Source: Central Bank of Montenegro.

Notes: Non-performing loans cover loans and matured receivables classified in categories C, D and E (sub-standard, doubtful and loss, respectively). NPL to total gross loans exclude interest due and accrued interest and fees.

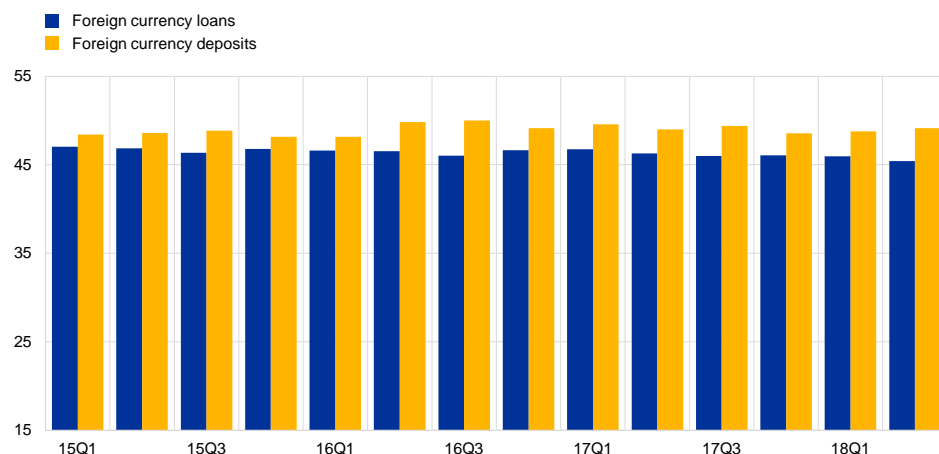
## 9.5 North Macedonia

**Over the review period, indicators of the banking systems' solvency, liquidity and profitability remained favourable and even improved, despite demanding business conditions.** In view of the protracted political crisis that only ended with the

formation of a new government in May 2017, economic activity stalled, bringing growth to a halt in 2017 on the back of fading investment and private consumption, thereby prolonging the challenging operating environment banks had already faced in 2015 and 2016. Despite this, the capital adequacy ratio, at 16.5% of risk-weighted assets in the second quarter of 2018, has remained comfortably above the Basel III requirements adopted in early 2017. Similarly, liquidity is ample, with the loan-to-deposit ratio having declined to 87.3% in the second quarter of 2018 and banks retaining considerable excess reserves with the central bank. Lastly, profitability has strengthened since the second quarter of 2016, although the large pick-up seen in 2018 (bringing returns on equity and assets to 21.3% and 2.38% respectively by the second quarter of 2018) was primarily due to one-off effects. At the same time, the financial system has remained bank-centric. With assets of close to 75% of GDP in the second quarter of 2018, banks remain the main financial intermediary, dwarfing market-based sources of corporate funding.<sup>68</sup>

**Chart 29**  
Household loan and deposit euroisation

(as a percentage of total loans or deposits)

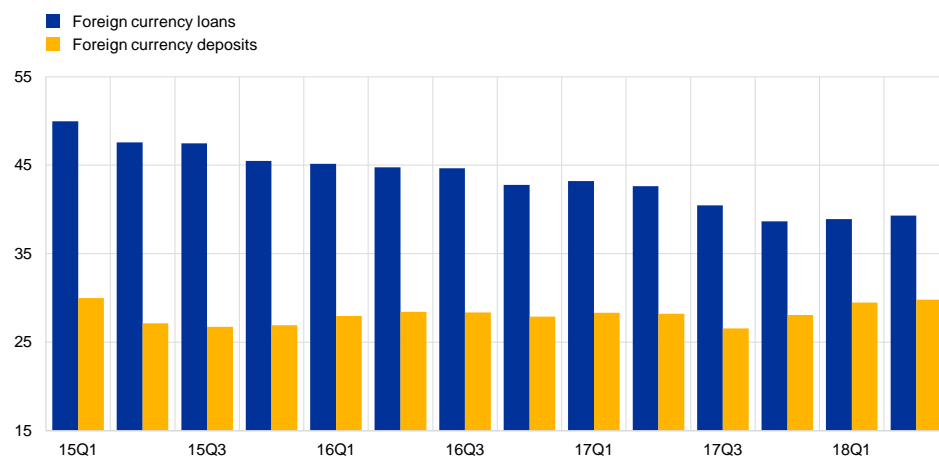


Sources: NBRNM and ECB calculations.

<sup>68</sup> In the second quarter of 2018, equity markets accounted for about 24% of GDP whereas no corporate bonds were outstanding.

**Chart 30****Non-financial corporation loan and deposit euroisation**

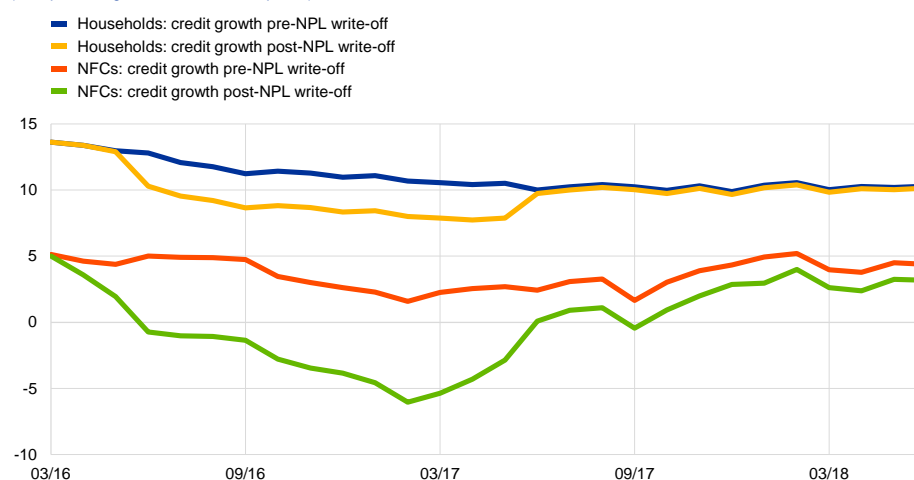
(annual percentage changes)



Source: NBRNM and ECB calculations

**Chart 31****Sectoral credit growth**

(as a percentage of total loans or deposits)



Sources: NBRNM and ECB calculations.

**Despite the banking system's resilience, progress on addressing its key challenges, namely the high degree of euroisation and the resolution of non-performing loans, has been patchy.** The euroisation of private sector loans (42.3% of total loans in the second quarter of 2018 from 45.6% in the second quarter of 2016) and deposits (43.7% of total deposits in the second quarter of 2018 from 44.2% in the second quarter of 2016) has fallen somewhat, yet improvements have been primarily concentrated in the corporate sector where the share of foreign currency loans declined to 39.3% (from 44.8%) (see Charts 29 and 30). For households, the decrease has been much less pronounced (45.4% from 46.5%) although they are unlikely to be hedged against currency risk. Similarly, households largely sustained their preference for foreign currency deposits (49.1% from 49.8%). As a result, the banking sector remains vulnerable to a tail risk scenario of a large and

unexpected depreciation in the denar's exchange rate against the euro. Even though banks appear sufficiently hedged against currency risk on aggregate,<sup>69</sup> they have extended a substantial part of their foreign currency loans to borrowers whose balance sheets are highly sensitive to a depreciating exchange rate. Turning to NPLs, their ratio to total gross loans dropped to a more manageable 4.9% in the second quarter of 2018 (from 7.2% in the second quarter of 2016), following write-offs mandated for NPLs for which there had been full provisioning for two years and the collection of a sizeable non-performing claim from a borrower in early 2018. In spite of this progress, debt restructuring on the part of borrowers has remained an issue that is yet to be fully resolved which, in addition to an only slowly recovering economy, appears to have also constrained credit extension, particularly to firms. Indeed, credit provided to non-financial corporations, before accounting for the write-off of NPLs, recently rose by a rather modest 4-5% (Chart 31).

**Against this background, further efforts by the authorities to foster denar use and enable an orderly resolution of non-performing claims are warranted.** In this regard, the National Bank of the Republic of North Macedonia (NBRNM) has spearheaded concerted strategies in 2018, enveloping several public sector institutions that will be relevant for their successful implementation, to promote the domestic currency and to arrive at a more comprehensive resolution framework for non-performing assets. Both strategies were adopted in December 2018. The speedy implementation of these would be a welcome development and echo policy guidance brought forward by the ECOFIN in the context of the country's Economic Reform Programme.

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<sup>69</sup> In the second quarter of 2018, the banking system's net open foreign exchange position accounted for 6.4% of its capital, compared to 10.3% in the second quarter of 2016.

**Table 10**

## North Macedonia: Financial soundness indicators

(percentages)	2015	2016	2016	2016	2016	2017	2017	2017	2017	2018	2018
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Regulatory capital to risk-weighted assets</b>	15.5	15.8	15.6	15.7	15.2	15.4	15.8	16.2	15.7	16.4	16.5
<b>Regulatory Tier-1 capital to risk-weighted assets</b>	13.9	14.3	14.1	14.2	13.9	14.1	14.5	14.6	14.2	14.8	15.1
<b>Common Equity Tier 1 capital (CET1) to risk-weighted assets</b>	n.a.	n.a.	n.a.	n.a.	n.a.	14.1	14.5	14.6	14.2	14.8	15.0
<b>NPLs net of provisions to regulatory capital</b>	8.3	8.2	8.3	8.9	7.1	7.9	8.4	7.6	7.9	5.0	5.0
<b>NPLs to total gross loans</b>	10.3	10.4	7.2	7.1	6.3	6.1	6.5	6.3	6.1	4.9	4.9
<b>... of which in FX (NPLs in FX to total NPLs)</b>	47.8	46.4	45.9	45.6	44.8	40.0	38.2	38.5	39.2	35.8	32.8
<b>Households: NPLs to total gross loans to households</b>	5.2	5.0	2.8	2.8	2.6	2.5	2.5	2.6	2.4	2.4	2.4
<b>Non-financial corporations: NPLs to total gross loans to non-financial corporations</b>	15.2	15.7	11.6	11.3	9.9	9.7	10.6	10.4	10.0	7.8	7.8
<b>Return on assets</b>	1.1	1.4	1.4	1.6	1.5	1.5	1.4	1.4	1.4	3.1	2.4
<b>Return on equity</b>	10.4	13.0	12.2	13.9	13.6	13.8	12.7	12.6	13.5	28.0	21.3
<b>Liquid assets to total assets</b>	28.2	28.7	26.0	27.1	28.9	27.8	27.2	27.0	27.1	27.4	27.1
<b>Liquid assets to short-term liabilities</b>	49.2	50.5	46.3	48.3	50.1	48.9	47.1	47.2	46.9	48.2	47.4
<b>Net open position in foreign exchange to regulatory capital</b>	11.1	10.3	10.1	12.9	14.5	9.6	7.8	7.3	6.2	6.6	6.4
<b>Interest margins to gross income</b>	62.8	64.9	62.6	63.3	62.7	63.6	62.6	62.4	60.6	56.4	57.5
<b>Cost-to-income</b>	51.6	50.1	51.7	50.5	49.8	50.0	50.8	50.0	48.7	42.2	44.6
<b>Non-interest expenses to gross income</b>	54.7	53.2	54.8	53.9	53.2	53.6	54.3	53.7	52.5	46.0	48.6
<b>Foreign-currency-denominated loans to foreign-currency-denominated deposits</b>	99.3	97.8	96.2	93.5	90.6	90.4	92.0	89.7	86.6	85.3	85.0
<b>Foreign-currency-denominated loans to total loans</b>	46.5	46.2	46.0	45.7	44.9	45.3	44.7	43.5	42.5	42.8	42.7
<b>Foreign-currency-denominated liabilities to total liabilities</b>	46.4	46.3	47.6	47.8	46.3	46.5	46.4	46.4	45.7	45.4	45.9
<b>Household debt to gross domestic product</b>	22.4	n.a.	n.a.	n.a.	23.0	n.a.	n.a.	n.a.	24.4	n.a.	n.a.
<b>Residential real estate prices (percentage change/last 12 months)</b>	-0.9	n.a.	n.a.	n.a.	-6.5	n.a.	n.a.	n.a.	-2.9	n.a.	n.a.
<b>Loan-to-deposit ratio</b>	90.6	90.8	92.3	90.4	87.0	87.6	89.4	89.3	87.7	87.2	87.3
<b>Loan-to-value ratios for housing loans</b>	79.1	79.6	57.5	59.7	58.3	58.9	59.2	61.6	65.1	65.1	61.4
<b>Ratio of external liabilities to total liabilities of banks</b>	9.8	9.4	9.7	9.7	9.5	9.0	9.9	9.0	8.7	8.4	8.3

Source: National Bank of the Republic of North Macedonia.

Notes: Loans include loans to the financial and non-financial sector. Non-performing loans are loans classified in risk category D and E or are loans that are past due for more than 90 days and meet a certain materiality threshold. The amount of non-performing loans to gross loans refers to non-performing loans/gross loans to the non-financial and financial sector. Foreign currency-denominated loans also comprise loans that are indexed to foreign currency. Liquid assets refer to cash, balances and deposits with the NBRM, placements in short-term instruments issued by the State, NBRM bills and correspondent accounts, sight deposits, overnight deposits and short-term deposits with foreign banks.

## 9.6 Serbia

**The Serbian banking sector remains well capitalised and liquid, as signalled by most key metrics.**

In October 2018, both the capitalisation and liquidity ratios stood well above their regulatory minima. Against a minimum threshold of 8%, the capital ratio was 23% in the second quarter of 2018, higher than in regional peers. The liquidity coverage ratio, introduced by the Serbian authorities as part of the strategy for implementing Basel III in 2017, was 218.3% as of 30 June 2018. This was also well above the regulatory minimum of 100%. Funding risk remains relatively low, as the loan-to-deposit ratio stood at 89% in the second quarter of 2018. After falling sharply in the aftermath of the financial crisis, the profitability of the banking sector has recovered well over the past year, which translated into a return on equity of 11.6% in October 2018. Banks' margins remain compressed however, squeezed by the low interest rate environment and high competition. Indeed, the Serbian banking market, in which a total of 28 banks operated as of September 2018, remains highly fragmented. At the end of 2017, the ten biggest banks held around 78.4% of the total assets, with only six banks holding a share over 5%.

**Risks relating to weak asset quality have significantly diminished, but NPLs remain elevated in state-owned banks (SOBs), something which continues to represent a source of financial vulnerability.**

The average ratio of NPLs to total loans reached 7.8% in the second quarter of 2018, some 15 percentage points below its peak in 2015 and below the pre-crisis level. The decline occurred on the back of the NPL strategy adopted by the Government and the National Bank of Serbia in 2015. Further to this, a decision mandating banks to move NPLs that are completely impaired to off-balance-sheet assets was implemented in September 2017. The decision was accompanied by amendments to the tax system in order to provide incentives for NPL resolution. The effects of the decision were swiftly reflected in the large number of write-offs executed by banks towards the end of 2017. NPL resolution via write-offs continued at a sustained pace in the first half of 2018. While the authorities made substantial progress in resolving NPLs, the gross NPL ratio remains relatively high<sup>70</sup> for SOBs at 13.9%.<sup>71</sup> Of the two largest state-owned banks, the restructuring of Banka Poštanska štedionica and the privatisation of Banka Komercijalna is ongoing. The authorities intend to update the NPL resolution strategy focusing on measures to accelerate NPL resolution in SOBs (where the Deposit Insurance Agency is in charge of their liquidation), while also broadening the scope to include bad assets of some public agencies.

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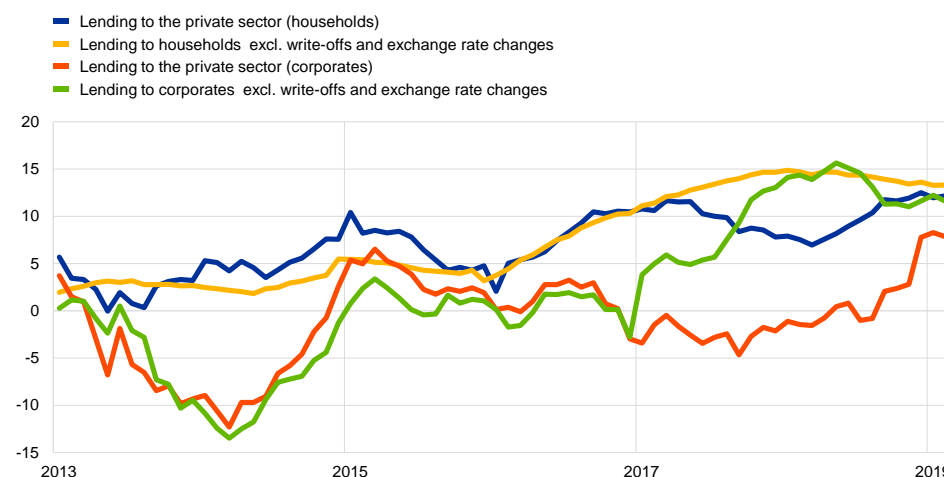
<sup>70</sup> At the same time, SOBs remain adequately capitalised (their capital ratio stand well above the banking sector average) and liquid.

<sup>71</sup> The figure refers to March 2018 as reported in [IMF Republic of Serbia: Request for a 30-Month Policy Coordination Instrument](#) in the context of the Republic of Serbia request for a 30-month policy coordination instrument.



**Chart 32**  
Lending growth

(annual percentage change)



Sources: National Bank of Serbia and Haver Analytics.

**Credit growth has been strengthening in recent quarters. Lending to the private sector increased by about 6% in the third quarter of 2018 in annual terms, reflecting increases in particular in the household (11.8%) but also the corporate sector (2.1%) (see Chart 32).** Adjusting for NPL write-offs and exchange rate changes, credit growth would be even stronger (12.2% overall in the third quarter of 2018). The recent pick-up in credit growth in the corporate sector is encouraging, as it has occurred after a long period of subdued growth and against continued write-offs and sales of NPLs, which have accelerated since 2017. Indeed, credit dynamics look particularly sustained in recent months when NPL write-offs and the effect of exchange rate movements are excluded. Several factors are behind the recent pick-up in credit growth. Owing to monetary policy easing at the start of 2018, interest rates have declined. In addition, the recovery in economic activity has strengthened, coupled with enhanced labour market dynamics. Moreover, Serbia's risk premium has fallen to historically low levels amid a low and stable inflation environment, reduced budget deficit, and a more favourable sovereign credit rating. Results from the Bank Lending Survey corroborate this, suggesting that the pick-up in lending activity reflects both demand and supply factors. In particular, results indicate that eased lending standards in the second half of 2018 reflect higher competition and cheaper sources of funding, but also positive expectations regarding economic activity, greater risk propensity and better real estate market prospects.

**Table 11****Serbia: Financial Soundness Indicators**

(percentages)	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
<b>Regulatory capital to risk-weighted assets</b>	20.9	21.5	21.6	21.2	21.8	22.3	22.4	22.5	22.6	22.7	22.9
<b>Regulatory Tier-1 capital to risk-weighted assets</b>	18.8	19.5	19.6	19.2	20.0	20.6	21.3	21.5	21.6	21.8	22.1
<b>Common Equity Tier 1 capital (CET1) to risk-weighted assets</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.2	21.4	21.5	21.7	22.0
<b>NPLs net of provisions to regulatory capital</b>	44.0	39.6	36.3	35.0	27.1	25.7	22.8	20.3	17.7	15.4	12.7
<b>NPLs to total gross loans</b>	21.6	20.9	20.2	19.5	17.0	16.8	15.6	12.2	9.8	9.2	7.8
<b>... of which in FX (NPLs in FX to total NPLs)</b>	74.4	73.3	73.2	72.4	72.6	72.4	71.4	74.9	71.5	71.4	73.5
<b>Households: NPLs to total gross loans to households</b>	11.7	11.5	11.1	10.7	10.0	9.6	8.9	7.1	5.9	5.4	5.1
<b>Non-financial corporations: NPLs to total gross loans to non-financial corporations</b>	21.7	20.8	19.6	18.7	17.2	17.1	15.9	13.2	10.4	9.7	8.1
<b>Return on assets</b>	0.3	1.9	1.3	1.4	0.7	2.3	2.1	2.2	2.1	2.1	2.1
<b>Return on equity</b>	1.5	9.2	6.5	6.9	3.3	11.4	10.6	11.0	10.5	10.5	10.6
<b>Liquid assets to total assets</b>	40.5	40.1	38.6	37.9	38.9	37.8	36.5	36.2	35.1	35.9	34.2
<b>Liquid assets to short-term liabilities</b>	61.3	60.7	57.4	56.1	56.6	55.0	53.0	52.6	50.9	52.3	48.8
<b>Net open position in foreign exchange to regulatory capital</b>	2.8	1.9	2.9	4.0	2.3	1.8	1.8	3.2	2.4	3.0	2.3
<b>Interest margins to gross income</b>	65.7	67.0	66.3	65.7	64.6	61.2	61.5	60.9	58.4	63.1	62.7
<b>Cost-to-income</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Non-interest expenses to gross income</b>	64.9	63.6	65.7	65.9	67.7	61.2	63.5	63.1	63.2	62.9	64.1
<b>Foreign-currency-denominated loans to foreign-currency-denominated deposits</b>	97.6	95.1	94.1	92.0	89.1	88.1	89.4	88.8	88.2	86.3	87.7
<b>Foreign-currency-denominated loans to total loans</b>	72.3	71.8	70.7	68.0	69.4	67.8	66.7	66.5	67.5	67.3	67.0
<b>Foreign-currency-denominated liabilities to total liabilities</b>	72.7	73.5	72.2	71.5	71.1	71.7	71.2	70.3	69.7	70.2	69.8
<b>Household debt to gross domestic product</b>	17.2	17.3	17.8	18.1	18.2	18.6	18.9	19.2	19.4	19.5	20.0
<b>Residential real estate prices (percentage change/last 12 months)</b>	-0.7	5.7	-0.2	4.6	-0.2	-0.4	1.6	1.5	3.1	0.7	-0.3
<b>Loan-to-deposit ratio</b>	95.4	95.4	94.9	94.5	89.2	91.6	93.2	92.1	89.0	88.3	89.3
<b>Loan-to-value ratios for housing loans</b>	68.5	68.3	70.4	69.8	70.2	70.3	71.3	69.8	70.2	70.7	70.1
<b>Ratio of external liabilities to total liabilities of banks</b>	79.7	79.3	79.5	79.5	80.5	80.1	79.7	79.9	80.2	80.1	80.9

Source: National Bank of Serbia.

Note: Non-performing loans cover the total outstanding debt under an individual loan (including the amount of arrears) under the following conditions:

- (i) where the payment of principal or interest is past due (within the meaning of the decision on classification of balance sheet assets and off-balance sheet items) over 90 days;
- (ii) where at least 90 days of interest payments have been added to the loan balance, capitalised, refinanced or delayed by agreement;
- (iii) where payments are less than 90 days overdue, but the bank has assessed that the borrower's repayment ability has deteriorated and doubts that the payments will be made in full.

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