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Strengthening the role of local currencies in EU candidate and potential candidate countries

Contents

Abstract

This paper deals with the phenomenon of high levels of unofficial euroisation in countries preparing for EU membership (Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Serbia and Turkey). The challenges stemming from unofficial euroisation are particularly relevant for central banks as high degrees of euroisation reduce the effectiveness of monetary policy and create risks to financial stability. Unofficial euroisation in these countries is fuelled by legacies of inflation and macroeconomic imbalances, close economic and financial linkages with the euro area, as well as the perspective of EU membership. While euroisation (or, more generally, dollarisation) is typically a sticky phenomenon that is difficult to reverse, entrenched as it is in the behaviour and mind-set of economic agents, the paper finds - based also on the experience of countries outside the region - that there is a set of policies under the competence of domestic authorities which are conducive to strengthening the use of domestic currencies, even though efforts to bring down dollarisation or euroisation rates typically take a long time to show results. In this context, macroeconomic stabilisation is a necessary but not sufficient condition. It needs to be flanked by targeted prudential and regulatory measures, as well as efforts to develop local currency capital markets. Authorities in EU candidate and potential candidate countries have already engaged in such endeavours and euroisation rates have gone down to some extent in recent years, though at different levels and at an uneven pace. Nevertheless, further efforts are needed, while acknowledging that some specific factors like the strong presence of euro area headquartered banks in these countries as well as their EU accession perspective are conducive to euroisation.

Non-technical summary

Unofficial euroisation or dollarisation is a widespread phenomenon in emerging, developing and transition economies. It describes a situation in which economic agents, i.e. private individuals and companies, of a specified jurisdiction use a foreign country's currency, often the US dollar or the euro, thereby partly replacing the domestic currency as a unit of account, a medium of exchange and a store of value (the classic functions of money). This is different to full or official euroisation or dollarisation where the respective country's authorities officially install a foreign currency as legal tender, either in parallel to or replacing the domestic currency. While the literature has traditionally focussed on cases in Latin America, there are also high degrees of unofficial euroisation in EU candidate and potential candidate countries, particularly in the Western Balkans.

Using a foreign currency is often a rational choice, in particular if trust in the domestic currency is low, inflation is high, the monetary policy track record is short and/or poor, and memories of high or even hyperinflation prevail. Fixed exchange rate regimes as well as close trade and financial ties with the anchor currency, typically the US dollar or the euro, are other factors conducive to euroisation/dollarisation. On the other hand, euroisation/dollarisation has significant drawbacks, particularly for central banks, as it reduces the effectiveness of monetary policy and gives rise to financial stability challenges. Furthermore, the central bank's ability to act as a lender of last resort to support financial institutions that experience temporary liquidity difficulties is limited as it does not have unlimited access to foreign currency.

The experience of many countries has shown that euroisation/dollarisation is a sticky phenomenon that cannot easily be turned around. While it would be unrealistic - and probably also not optimal - to aim for the complete abolishment of euroisation/dollarisation, there have been cases where country authorities were successful with de-dollarisation strategies, albeit over an extended period of time. The analysis of three such country cases from different regions and times (Israel in the 1980s and 1990s, Poland in the 1990s and early 2000s, and Peru in the 2000s) shows that macroeconomic stabilisation is a necessary condition for reducing dollarisation. However, it was not sufficient as it needed to be flanked by other measures, in particular of a regulatory and prudential nature. The shift to flexible exchange rates and an inflation-targeting regime as well as the development of local currency capital markets also seemed to be conducive to reducing dollarisation in these three countries. Last but not least, developing credible institutions that enjoy public confidence also seemed important in order to underpin stability-oriented macroeconomic policies.

As regards EU candidate and potential candidate countries in the Western Balkans, several driving factors of euroisation in the region can be identified. Macroeconomic instabilities and memories of high and hyperinflation led to relatively low levels of trust in local currencies that are difficult to reverse. Furthermore, close trade and

financial linkages with the euro area, the presence of euro-area headquartered banks as well as workers' remittances from the euro area tend to increase the use of the euro in the Western Balkan economies. Their status as prospective EU and, eventually, euro area Member States is a further contributing factor to euroisation. Hence, all countries are highly euroised, with the highest levels observed in Serbia (Kosovo and Montenegro as officially euroised economies are not taken into account in the analysis). The situation in Turkey is somewhat different as dollarisation rates are considerably lower and the foreign currency in use is the US dollar, rather than the euro. All countries in the region have introduced measures to foster the use of local currencies (or that have the potential to do so as a side effect even if not officially labelled as such), with only Serbia following an official de-euroisation (or "dinarisation") strategy.

Overall, euroisation rates in EU candidate and potential candidate countries in the Western Balkans have gone down in recent years, even though progress is slow and uneven. To what extent specific measures have reinforced this trend is difficult to ascertain. However, the analysis confirms literature findings that macroeconomic stability (in particular, but not only, disinflation) is key as it not only increases trust in local currencies, the monetary policy framework and the domestic financial system, but also enhances the credibility of domestic policymakers and institutions.

Furthermore, prudential and regulatory tools are effectively being used to reduce euroisation. Prudential measures taken in the region include ceilings on foreign exchange exposure, higher reserve requirements for foreign exchange denominated liabilities, liquidity requirements for foreign exchange denominated assets as well as provisioning requirements. Some progress has also been made by EU candidate and potential candidate countries in implementing the set of recommendations made by the European Systemic Risk Board (ESRB) in 2011 on foreign exchange lending.

The development of local currency capital markets is also seen as an efficient tool to reduce euroisation. To that end, some governments in the region have gradually increased the issuance of debt instruments in local currencies. However, in most cases, these are held until maturity by the local banking system, so there is no real market in which these securities are traded. The role of capital markets as a source of funding for corporates is also underdeveloped. Finally, given that local currency capital markets are relatively shallow and their infrastructures need to be further developed, the demand side (i.e. institutional and private buyers) is also not very well diversified.

While authorities in EU candidate and potential candidate countries can further enhance their efforts to foster the use of local currencies, these cannot be expected to yield quick results over the short term. However, as the experience of other countries has also shown, perseverance in the pursuit of stability-oriented macroeconomic policies supported by credible institutions and combined with targeted prudential and regulatory measures, and developing local currency capital markets, can help to increase the use of local currencies and thereby enhance the effectiveness of monetary policy, as well as reduce risks to financial stability inherent in high levels of euroisation.

1 Introduction

In the global monetary system national authorities (or in the case of currency unions supranational authorities) usually have a monopoly over the currency by being the sole issuer and imposing it as the sole legal tender. However, economic agents may opt to bypass this monopoly by choosing to use foreign currency for different purposes. Economic agents can choose to partly circumvent the seigniorage or "inflation tax" monopoly for a variety of supply and demand reasons by engaging in "currency substitution", outsourcing the traditional functions of money (store of value, means of exchange, unit of account) to a currency other than the domestic one. This phenomenon is called (unofficial) dollarisation or euroisation.[1] As a result, some form of currency competition is introduced into domestic markets (Mueller, 1999) that has the potential to act as a trigger for national authorities to improve their performance. However, the more confidence has been lost, the more difficult it will be to reinstall it and to regain power over the domestic monetary system.

It needs to be noted that this is distinct from official euroisation or dollarisation whereby the authorities of a country (or territory) decide to officially adopt a foreign currency as legal tender, as is the case of Montenegro and Kosovo in the European context or Panama and Ecuador in Latin America. The paper does not discuss these official euroisation cases but focuses instead on unofficial euroisation.

Unofficial euroisation/dollarisation can be observed in many developing and emerging economies, and the focus of the discussion is often on Latin America where many countries display a high level of dollarisation. Nevertheless, it is also a wide-spread phenomenon in EU candidate and potential candidate countries[2], notably in the Western Balkans where the prospect of EU and, eventually, euro area entry is an additional contributing factor. At the beginning of their transition phase, these countries opted for a wide set of monetary policy and exchange rate regimes ranging from a currency board in Bosnia and Herzegovina and a conventional pegged arrangement in the former Yugoslav Republic of Macedonia, to floating regimes accompanied by inflation targeting in Albania and Serbia. Nevertheless, they all exhibit significant levels of unofficial euroisation, albeit to different degrees.

The degree of euroisation can be measured in different ways. As the amount of foreign cash circulating in an economy is difficult to assess, the rates of outstanding foreign currency-denominated loans/deposits to total loans/deposits or to monetary

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[1] The terms "dollarisation" and "euroisation" describe the same phenomenon and are used interchangeably in this paper in conceptual terms. While in the literature dollarisation is more generally used regardless of the currency that replaces the national currency (typically the US dollar or the euro, but also other currencies such as the Australian dollar or the British pound), euroisation is only used in the European context when the euro is the foreign currency in use.

[2] Current EU candidate countries are Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey. Bosnia and Herzegovina and Kosovo (this designation is without prejudice to position on status and is in line with UNSCR 1244/1999 and the ICJ opinion on the Kosovo declaration of independence; it is used throughout the text) are considered potential candidate countries. Icelandic authorities declared in spring 2015 that they would not want Iceland to be considered as an EU candidate country anymore. Iceland is not a subject of this analysis.

aggregates are often used as indicators and countries are grouped into high, moderate and low-dollarised economies. While an optimal level of dollarisation in an emerging or developing economy may not necessarily be equal to zero, given i.a. portfolio and risk diversification considerations, it seems evident that in highly, and to some extent also moderately-dollarised economies disadvantages clearly outweigh potential benefits, and thus there is a case for reducing this phenomenon.

Euroisation has significant drawbacks for monetary policy and financial stability. Therefore, it should be a matter of concern for central banks and governments in countries with an EU membership perspective, as well as for EU institutions, including the ECB. While in Serbia the authorities have implemented an explicit strategy to increase the use of the local currency in the economy, in other countries measures are more of an implicit nature.

Reducing dollarisation and regaining control of monetary policy is often one of the major aims of disinflation policy after a period of elevated inflation, but can be a very difficult and lengthy process. This is especially true for countries with repeated bouts of high inflation (Reinhart and Rogoff, 2009). Central banks wishing to strengthen the use of the domestic currency face the same challenge any producer of goods and services faces: only products whose quality is reliable will sell (De Nicoló et al., 2003). While exchange-rate based stabilisation (pegs) is often used to reduce high levels of inflation, the official anchor currency is usually the same one that was previously de facto used when inflation was high. Coupled with memory/hysteresis effects, this monetary policy framework helps to explain why it is hard to un-do dollarisation even when macro-stability has been achieved - and also why "floating" is often prescribed as a way to change expectations and induce an increased use of the domestic currency (see Zettelmeyer et al., 2010; Haiss and Rainer, 2011; and Kokenyne et al., 2010). This seems to be backed by the three country cases described in chapter 3, which point towards a well-designed and credible inflation-targeting framework as a promising avenue, complemented by targeted prudential measures. Last but not least, the development of local capital markets is an important ingredient of a de-euroisation strategy (see Zettelmeyer et al., 2010).

This paper intends to shed some light on the phenomenon of euroisation and its occurrence in EU candidate and potential candidate countries, as well as to help identify a set of policies that have the potential to strengthen the use of local currencies. The different forms, drivers and drawbacks of euroisation – in particular for monetary policy makers and institutions in charge of safeguarding financial stability – as discussed in the literature are described in Section 2. Section 3 gives an overview of three selected country cases from different periods and regions that succeeded in reducing unofficial dollarisation. Section 4 takes a closer look at the euroisation phenomena in the EU candidate countries and potential candidates before conclusions are drawn for this country group in Section 5.

2 Drivers and drawbacks of unofficial euroisation/dollarisation

2.1 Drivers

When looking at the drivers of euroisation/dollarisation, two groups can generally be identified: supply-side ("push") and demand-side ("pull") factors. Usually, though, there is no single factor responsible for dollarisation processes, but rather a set of factors that are partly interdependent. In a recent meta-analysis of 32 studies that provide around 1,200 estimated coefficients for six drivers of foreign currency-lending, focussing on Central, Eastern and Southeastern Europe (CESEE) and Latin America, Hake et al. (2014) find as a common pattern the fact that macroeconomic instability (as expressed by inflation volatility) and banks' funding in foreign currency play a significant role in explaining loan dollarisation in both regions. In contrast, the interest rate differential only appears to be a key determinant in Latin America, while the positive impact of exchange rate volatility on dollarisation implies a more prominent role for supply factors in the CESEE region.

2.1.1 Demand-side ("pull") factors

High inflation or hyperinflation are among the core drivers of dollarisation, in particular when they are persistent and accompanied by low institutional credibility and general macroeconomic instability as well as a tendency for the exchange rate to depreciate. However, it is not only the level or trend of inflation or the exchange rate that are important in that regard, but also their volatility and the ratio between the two variables (the so-called minimum variance portfolio ratio – MVP ratio) as high volatilities create uncertainty. Dollarisation therefore expresses the desire of residents to diversify and protect their assets from the risks of internal or external devaluation of their own currencies (Berg and Borensztein, 2000; Quispe-Agnoli, 2002; Reinhart and Rogoff, 2009). Furthermore, the high cost of using domestic currency for transactions prompts the public to look for available alternatives in this regard (Berg and Borensztein, 2000; Ballino et al., 1999). Even when inflation rates go down, an "inflationary memory" may still lead to persistent euroisation. The lack of monetary history combined with an uncertain institutional environment in newly-formed countries or territories – such as in the successor states of former Yugoslavia – may constitute an additional driver for using foreign currencies. In this "currency substitution" process foreign currencies take over the function of unit of account and means of exchange from the domestic currency, based on inflation differentials that penalise the holdings of domestic currency. Risk and return considerations about domestic and foreign assets in an inflationary environment also lead to "asset substitution", i.e. economic agents tend to hold financial assets in foreign rather than domestic currency, thus replacing it as a store of value.

Furthermore, the inability of certain countries to develop deep local currency markets also leads to "financial dollarisation" on the liability side (Levy Yeyati, 2003). Borrowers in developing or emerging economies are usually unable to obtain financing abroad in the domestic currency (which may also be related to episodes of high inflation and the lack of credible monetary institutions backing the domestic currency). The result is what in the literature is called "original sin" (cf. Eichengreen et al., 2002). Countries suffering from this "original sin" will have by definition a large part of their external debt denominated in foreign currency. The fact that interest rates for borrowing in foreign currency are usually lower than in domestic currency creates an additional incentive for borrowers to take loans in foreign currency. Once a sufficiently large pool of foreign currency users has been formed, "network effects" may also exacerbate this trend (Uribe, 1997).

2.1.2 Supply-side ("push") factors

The increasing integration into world markets and rising volumes of trade as well as close financial linkages (e.g. through foreign bank presence) with an economy issuing a major currency clearly foster dollarisation tendencies. This is the case for many Latin American economies with their close ties to the US but also for the EU candidate and potential candidate countries where real and financial linkages with the EU and the euro area are very tight (see also Section 4.2.4) and which, in addition, have an EU membership perspective (see also Section 4.2.6).

Fixed exchange rate regimes are often a rational choice, in particular in small open economies with one major trading partner. This choice may also be made in response to euroisation tendencies, and both may be mutually reinforcing. As discussed in Calvo and Reinhart (2002), the "fear of floating" is manifested as central banks' reluctance to allow the exchange rate to adjust, resulting in frequent central bank interventions aimed at avoiding adverse balance sheet effects in the private sector associated with major devaluations. Economic agents therefore anticipate exchange rate stability which in turn is conducive to high levels of unofficial euroisation (Levy Yeyati, 2003), as they tend to underestimate exchange rate risks. Therefore, the decision taken by monetary authorities as a reaction to increasing levels of dollarisation (mainly through bank liabilities, including deposits as well as borrowing from abroad) has itself the potential to further foster dollarisation tendencies, mainly on the liability side of firms and households via the expectations of economic agents about the fixed exchange rate as they strive to benefit from lower borrowing rates in foreign currency. On the other hand, in cases where a flexible exchange rate regime is associated with an elevated level of exchange rate volatility - which is often linked to high inflation - this volatility can lead to more euroisation on the asset side of firms and households which strive to protect the real value of their income.

While the interest rate differential is generally perceived as a demand-side driver of foreign currency loans, it can also have supply-side effects as has been shown by the recent process of substituting funding sources in some Latin American countries, ranging from bank credit in foreign currency in the domestic market, when banks

offer cheaper loans in an effort to gain market shares, to fixed income issuance in foreign currency in international markets (Steiner, 2011; Hake et. al., 2014).

2.2 Drawbacks

At first sight, (unofficial) euroisation processes reflect the rational economic behaviour of private economic agents. In smaller countries with strong trade and financial linkages to larger countries or currency areas, a certain low or moderate level of partial euroisation may be justified: importers could usefully hold some euro deposits in order to lower transaction costs and hedge against sudden exchange rate changes. Similarly, exporters that generate a constant revenue stream in euros would not face a currency mismatch if they had some euro liabilities. Partial euroisation could also promote financial deepening and integration with international markets to some extent. Therefore, an optimal level of euroisation would probably be higher than zero, but definitely lower than the levels currently observed in many emerging and developing economies, including in the Western Balkans.

There are potentially serious macroeconomic and financial stability drawbacks related to higher or high levels of euroisation that are particularly relevant for central banks as the guardians of both price and financial stability. Challenges include the vulnerability of the financial system to sudden changes in capital flows and the associated potential for nominal exchange rate volatility, the weakening of the central bank's effectiveness in the conduct of monetary policy and of its function as a lender of last resort, as well as constraints in the choice of an appropriate monetary and exchange rate regime.

2.2.1 Drawbacks for monetary policy

Policymakers should care about euroisation as it reduces the effectiveness of monetary policy and makes the transmission of monetary impulses to the real economy more complex than would otherwise be the case. In particular, the central bank has less room to influence macroeconomic variables as the monetary transmission mechanism via interest rates is weakened (García-Escribano, 2010; Acosta-Ormaechea and Coble, 2011). In the case of asymmetric shocks, monetary and exchange rate policy cannot (or only to a limited extent) react as a shock absorber as policymakers do not have the same level of control over monetary aggregates, the transmission mechanism of changes in interest rates to the real economy is hampered and the exchange rate leverage may be limited by the "fear of floating". While earlier studies on the role of dollarisation in aggravating the real effects of financial crises do not come to uniform results, Chitu (2012) found that unofficial dollarisation/euroisation was an amplifying contributor to the economic downturn of 2007-2009 in emerging market economies.[3]

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[3] Using both OLS and Bayesian models she finds that real GDP growth declined on average by 0.84pp more in economies where loan dollarisation was 10pp higher.

Confronted with high euroisation, many policymakers favour the maintenance of a fixed exchange rate – a choice that helps to further reinforce the status quo (see above the "fear of floating" argument). Nevertheless, some dollarised countries have implemented monetary policies under flexible exchange rates by managing their domestic money supplies or targeting inflation rates. But equally in such cases the widespread presence of foreign currency-denominated liabilities in both the banking sector and the real economy may de facto limit policy space. Under inflation-targeting regimes, price stability may still be targeted via conventional monetary policy tools such as the short-term interest rate, but their effectiveness needs to be boosted by measures to control financial dollarisation such as specific reserve requirements for foreign exchange liabilities or interventions in foreign exchange markets to smooth exchange rate volatility. In case a central bank wishes to define intermediate targets for monetary aggregates, it has to take into account the fact that money supply includes a component which is beyond its control. Under inflation targeting the leeway for moving interest rates may be limited by the need to maintain an interest rate differential to the anchor currency to avoid sharp exchange rate depreciation that in turn would deteriorate private sector balance sheets. Finally, euroisation also limits seigniorage revenue for monetary authorities.

2.2.2   Drawbacks for financial stability

Allowing for foreign-currency denominated assets and liabilities could in principle be conducive to financial deepening and promote financial intermediation and diversification, especially in a context where the presence of foreign-owned banking entities is domestically significant. However, the most severe drawback of dollarisation/euroisation is the potential effect it might have on the banks' balance sheets in the event of adverse exchange rate developments, either directly (through currency mismatches and net open foreign exchange positions) or indirectly through unhedged borrowers. In the latter case currency risks are transformed into solvency risks. As noted by De Nicoló et al. (2003), the indirect solvency risk, which remains for banks even when the foreign exchange exposure of both sides of the balance sheet is matched, may be associated with an increased risk of deposit withdrawals that can lead to bank runs in response to or in anticipation of devaluation. In a similar vein, currency mismatches of corporates, households and the public sector can have severe destabilising effects not only for the banking sector but for the wider economy as a whole (Galindo and Leiderman, 2005).

Furthermore, in the face of widespread (unofficial) euroisation, the ability of the central bank to act as a lender of last resort for the domestic banking system is compromised as its access to foreign currency is limited (and finite). In turn, this implies that the central bank cannot fulfil its stabilising role as a safeguard against the liquidity problems of a single institute or threats to the system as a whole.

3 Selected country cases of successful de-dollarisation

Authorities in several countries have tried to reduce the level of dollarisation by different means with varying degrees of success. Experience from Latin America as well as Central Europe of "forced de-dollarisation" policies (i.e. legal restrictions on the use of foreign currency) is not very promising. By contrast, reforms of macroeconomic regimes and institutions in order to increase macroeconomic and institutional credibility have proved more successful in comparison, even though they take a lot of time. These have often been accompanied by a move towards floating exchange rate regimes under inflation-targeting frameworks (Tkalec, 2013). In the literature, Israel (beginning in the mid-1980s), Poland (as of early 1990s) and Peru (as of early 2000s) are often cited as three of the relatively successful examples of reduced unofficial dollarisation (cf. e.g. Reinhart et al., 2003 and García-Escribano, 2010). In the cases of Israel and Poland this can largely be seen as a "by-product" of successful stabilisation policies and regulations, while in Peru it was the result of a targeted de-dollarisation strategy. These countries represent three different geographic regions, their de-dollarisation process starts in three different decades and – at least to some extent – they feature somewhat different forms of dollarisation. Therefore, in what follows, their cases are briefly described as illustrative examples.

3.1 Israel

Israel's experience with dollarisation is characterised by milder forms of currency substitution, with the use of foreign currency as a means of payment and store of value being a shorter-lived phenomenon that was mainly due to a period of high inflation in the first half of the 1980s. A government-induced system of indexation in many parts of the economy, and to some extent policies of financial repression implemented after the country's independence in 1948, also contributed to the currency substitution episode which still tends to influence people's behaviour.

The emergence of triple-digit inflation rates in the 1980s was caused by severe mismanagement in macroeconomic policies (i.a. the public sector deficit averaged 13% of GDP between 1970 and 1984) including monetary financing as well as in the banking sector (Offenbacher and Stein, 2003). This aggravated the pre-existing inflationary trend of the 1970s. As a response to this inflationary development and to a fear of further government measures resulting in expropriation, individuals started to hoard more and more foreign cash in the first half of the 1980s. The hyper-inflation (reaching 450% in 1984 and 300% on an annualised basis in the first half of 1985) was halted in mid-1985 by the implementation of the Economic Stabilisation Plan (ESP). Inflation came down to 15-21% in the second half of the 1980s, high single-digit rates in the first part of the 1990s and lower single-digit rates for most periods as of mid-1997. In parallel to the disinflation process, a de-dollarisation

("shekelisation") process took place that was supported by different elements of the ESP, a gradual reduction in the nature and extent of indexation, the development of local currency capital markets and the inflation-targeting regime introduced in 1992. The main elements of the authorities' stabilisation strategy were the following:

1. The 1985 ESP included macroeconomic stabilisation measures such as a significant cut in government expenditure and deficit and a sharp devaluation of the shekel (combined with the introduction of the new shekel, deleting zeros from the old currency), followed by the introduction of a fixed exchange rate regime replacing a crawling peg. Monetary financing of government deficits was forbidden by the so called "no-printing law" and an agreement with labour unions to enact wage controls was reached, thus decoupling wages from prices. Temporary price controls over a broad range of products and services were implemented. Finally, dollar-linked short-term deposits with maturities of up to one year were "closed", i.e. while old deposits were still accessible under the original terms, no new deposits were allowed. Furthermore, the authorities introduced a one-year mandatory holding period for all deposits in foreign currency, making those deposits substantially less attractive than other indexed financial instruments which remained available in the financial market.

2. The government started issuing un-indexed long-term bonds in 1989 denominated in shekel with floating rates to finance the budget with maturities of six years, followed by the introduction of fixed rate un-indexed bonds with maturities of 2-10 years between 1995 and 2001.

3. The Bank of Israel was among the first central banks worldwide to introduce an inflation-targeting regime in 1992 which gradually replaced the exchange rate as a nominal anchor (Bank of Israel, 2007). While in 1992 the inflation target was set at 14-15%, it was gradually lowered to a range of 1-3% which has been in place since 2003. Finally, in June 2005 the exchange rate band was abolished, and the shekel started to float freely.

4. Moreover, some measures to change bank behaviour were introduced between 1990 and 2002. Reserve remuneration has been differentiated for local and foreign currency. The transfer of foreign currency deposits has been banned and supervision has been strengthened to ensure that banks maintain covered positions in their foreign currency activities (Kokenyne et al., 2010).

1994-2014

- CPI inflation (annual % change, rhs)
- FX credit to total credit, private sector (%)
- Fx deposits to total deposits, private sector (%)
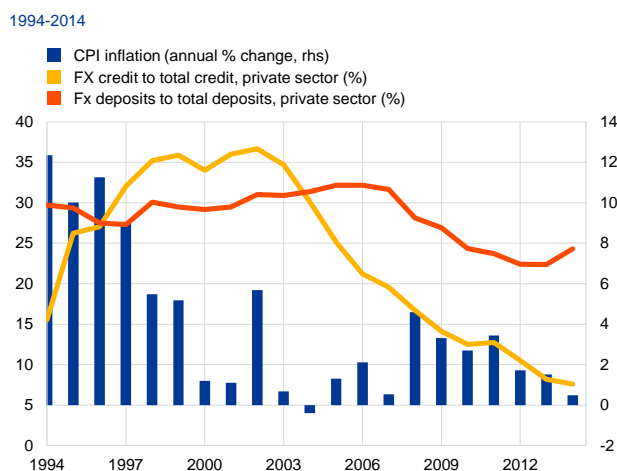
Note: The chart depicts a proxy of dollarisation of the Israeli economy, but does not necessarily reflect the overall currency (or foreign exchange) position of banks.
Sources: Bank of Israel, Haver Analytics and ECB staff calculations.

Overall, Israel can serve to demonstrate that sound macroeconomic performance amid a low-inflation environment coupled with targeted prudential and administrative measures can reduce dollarisation significantly when a legacy of high inflation and financial repression exists. However, as **Chart 1** shows, the share of dollarised loans in total loans has come down much faster than its counterpart on the bank deposit side.[4] This Israeli experience seems to suggest that the hysteresis effects of dollarisation can be protracted among households, and hence that targeting de-dollarisation measures at banks' assets (rather than their liabilities) may be comparatively more successful. However, it needs to be noted that the opposite effect can be observed in Poland, while in Peru dollarisation rates have come down in parallel on the lending and deposit side, as will be shown by the respective country cases in the following two sub-sections. Explanations for these different patterns of the behaviour of lending and deposit dollarisation rates could lie in different structures of the banking system or different levels of trust in local currencies on the side of the borrowers/depositors.

3.2 Poland

When the authorities in the early stages of Poland's political and economic transition process decided to establish full convertibility of the Polish zloty by removing the strict foreign exchange controls in January 1990, a significant increase in currency substitution took place. At the time, currency in cash and in bank accounts was composed of 75% in foreign currencies and only 25% in zloty, according to Narodowy Bank Polski. Dollarisation was inherited from communist times and foreign currencies were still extensively used in price-setting and payments, as a rule in large value transactions between private agents (cars, houses and apartments, land, etc.), whereas indexation to hard currencies was widely used in private contracts, especially in private debt redemption. The removal of controls was part of a wider political and economic reform programme transforming Poland into a market-based economy (the "Polish Big Bang"). Inflation had already picked up strongly in the second half of 1989 as a consequence of the removal of price ceilings in a shortage economy with monetary overhang and a system of general wage and income indexation (van Aarle, 1994), and reached 250% in 1990. As part of the subsequent disinflation process, inflation rates were brought down to around 20% in the mid-1990s.

The following elements were crucial in the de-dollarisation process in Poland:

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[4]   However, it needs to be noted that in the early 1980s the share of dollar-denominated deposits in total deposits amounted to more than 50%.
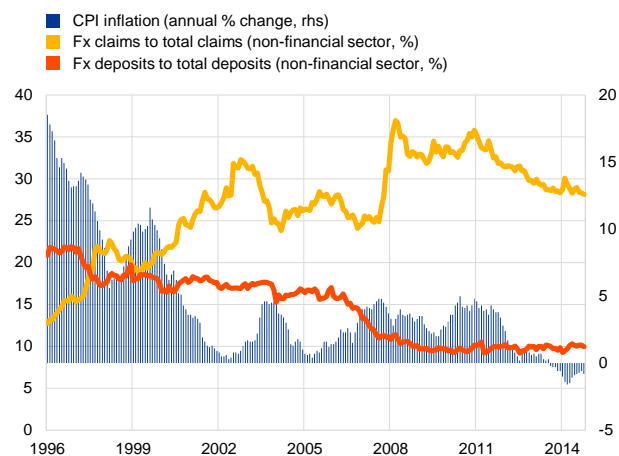
1. The macroeconomic reform programme aimed to liberalise the economy both internally and externally. Trade barriers were removed and fiscal deficits reduced. Subsidies and a majority of administered prices were abolished. A mature legal framework and the institutional infrastructure of a market economy were gradually created.

2. A two-tier banking system was established and market rates were applied to foreign currency deposits held with domestic banks. A special but temporary law was passed by the Parliament in 1993 on the "Financial Restructuring of Enterprises and Banks". A new banking law was introduced that set the basis for prudential regulation.

3. The growth of the monetary aggregate M2 was defined as the intermediate objective of monetary policy. The zloty was fixed against the US dollar and then gradually devalued. In October 1991, a crawling peg to a basket of currencies was introduced.[5] The crawling rate was initially fixed at 1.8% a month (lower than the differential between Polish inflation and the average inflation in the countries whose currencies were included in the basket) and then periodically reduced throughout the 1990s. Narodowy Bank Polski gradually enhanced the degree of exchange rate flexibility. In 1995, the zloty was allowed to fluctuate within ±7% of its central parity. In February 1998, the fluctuation band was widened to ±10% and the monthly rate of crawl was reduced to 0.8%.

4. The currency reform had gradual disinflationary effects as the devaluation of the zloty - and therefore imported inflation - became lower over time which helped to restore the purchasing power of the zloty, while real interest rates remained high. During 1993, annual CPI inflation fell below 40%, and through 1995 fluctuated around 30% before falling to one-digit rates in 1998.

5. The shift to a new currency regime was completed by two further steps: First, in 1995 the new zloty was introduced by dividing the old unit by 10,000. Second, in 1998 Narodowy Bank Polski became the second central bank in Central and Eastern Europe to switch to direct inflation targeting, after the Czech National Bank. The initial inflation target was set at a range of 8-8.5% for 1999 and then gradually lowered to 2.5% ± 1pp where it has stood since 2004. The floating exchange rate has shielded the economy from external (idiosyncratic) shocks.

6. Several measures to change bank behaviour were introduced in the late 1990s: (i) a system to monitor the quality of banks' foreign exchange risk management in order to raise awareness of currency risk; (ii) enhance the on- and off-site monitoring toolkit to improve the monitoring of banks' unhedged foreign exchange positions; (iii) regulation which requires administrative approval for the opening of local foreign exchange accounts and thus discriminating against these accounts (1996-1999) (Kokenyne et al., 2010)

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[5]   In a crawling peg regime, the currency is adjusted periodically in small amounts at a fixed rate or in response to changes in selected quantitative indicators.

1996-2015

- CPI inflation (annual % change, rhs)
- Fx claims to total claims (non-financial sector, %)
- Fx deposits to total deposits (non-financial sector, %)

Sources: Narodowy Bank Polski, Haver Analytics and ECB staff calculations.

Overall, the new currency regime was successful in bringing inflation rates down (see **Chart 2**). The share of dollarised deposits in total deposits also decreased markedly. However, developments regarding the share of foreign currency denominated loans in total loans have been more uneven in comparison: following a consistent increase in the run-up to the country's EU accession in May 2004, this share declined and picked up again in the aftermath of the global financial crisis of 2008. Furthermore, the level remained significantly above the equivalent for foreign currency deposits (**Chart 2**), thus displaying a different pattern compared to Israel (see Section 3.1, **Chart 1**).

3.3   Peru

Peru has a long history of dollarisation. Already in the 1980s the Peruvian authorities saw a case for combatting the high dollarisation in the country, enacting measures to force conversion of foreign assets into domestic currency in August 1985. While dollarisation rates did indeed go down, the "side-effects" of this interventionist "forced conversion" were disastrous: Capital flight, increasing macroeconomic instability, decreasing bank intermediation and in particular a loss of credibility of policymakers. Therefore, the restrictions on the holdings of foreign currency were lifted in 1988, which on the back of very high inflation rates, culminating at almost 7,500% in 1990, caused a rapid re-dollarisation. While in the 1990s, inflation rates were brought down, reaching single-digit numbers in 1997, dollarisation remained high. The prevailing form of dollarisation in Peru is financial or asset dollarisation, whereas the majority of payments are made in local currency (Schaub, 2009). At the turn of the century, the situation in Peru was characterised by some form of "Gresham's Law" which basically says that "bad money drives out good". Domestic currency was used for transactions and foreign currency as reserve value. In order to tackle this situation, the Peruvian authorities engaged in a new, more promising attempt to de-dollarise the economy in the first decade of the new century. The main elements of their strategy were as follows:

1. Macroeconomic conditions – helped by a favourable commodities cycle – markedly improved in the 2000s.[6] Meanwhile, the government pursued fiscal surpluses, resulting in a reduction of public debt to below 30% of GDP.

2. The central bank introduced an inflation-targeting regime in 2002 (initially with a target of 2.5% ± 1pp which was lowered to 2% ± 1pp in 2007) and was able to contain inflation and anchor expectations. It used sterilised foreign exchange interventions to smoothen exchange rate volatility without changing the market trend. At the same time, the central bank built up foreign exchange reserves, providing a significant buffer against balance-of-payment difficulties or stress in the banking sector. The central bank's policy rate was used as a monetary instrument establishing a reference interest rate in domestic currency.

3. Several prudential measures introduced in the 2000s were conducive to de-dollarisation as they reduced the banks' incentives to borrow and lend in foreign currency. These measures included (i) a change in the reserve requirement rates for deposits in domestic and foreign currency as well as in the remuneration of required reserves; (ii) provisions for foreign currency risks; (iii) liquidity requirements which are higher for foreign currency assets than for domestic ones; (iv) capital requirements on open foreign exchange positions.

4. The development of both private and public debt markets in local currency can also be considered as an important factor in the de-dollarisation process in Peru. In 2003, the authorities launched a public debt management strategy with the objective of developing a yield curve of government bonds in the domestic currency soles and reducing the share of foreign exchange denominated public debt. As a result, the share of public debt issued in domestic currency rose significantly. At the same time, private bond issuances in local currency also increased substantially.

5. The "Consumer Protection Law", which was amended in 2004, obliged retailers and wholesalers to display prices in domestic currency.

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[6] Peru was granted investment grade by Fitch and Standard & Poor's in 2008 and by Moody's in 2009.

Foreign exchange lending and deposits in Peru

1994-2015

- ■ CPI inflation (annual % change, rhs)
- ■ Fx deposits to total deposits, private sector (%)
- ■ Fx credit to total credit, private sector (%)
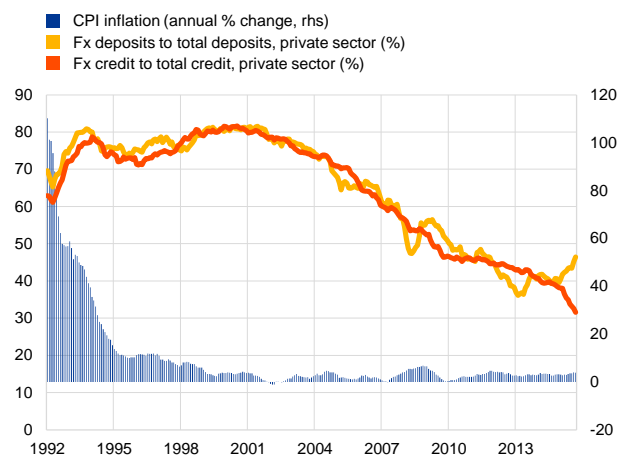
Notes: Depository corporations' loans and deposits to/from the non-financial private sector.
Sources: Central Reserve Bank of Peru, Haver Analytics and ECB staff calculations.

The rate of deposits in foreign currency to total deposits has fallen from 80% to 46% between 2000 and 2015 (see **Chart 3**). While the overall trend is clearly downwards, there have been episodes of rising rates, including between early 2013, when the lowest level so far was recorded in January at 36%, and 2015 (August figure). As regards credit in foreign currency, the trend is more clear-cut and has been constantly directed downward, displaying rates of 80% in the year 2000 which have fallen to 32% in August 2015. While these ratios would still establish Peru as a highly dollarised economy, progress in de-dollarisation has nonetheless been remarkable, not only in absolute terms but also relative to the country's own unsuccessful experience with earlier "forced conversion" de-dollarisation strategies. These findings also suggest that market-driven de-dollarisation processes are more promising, even though they tend to take a long time.

4 Unofficial euroisation in EU candidate and potential candidate countries

4.1 Recent trends

According to the most common measures of dollarisation/euroisation, Western Balkan EU candidate and potential candidate countries belong to the category of "highly euroised economies", displaying ratios of above 40% for both foreign currency deposits and lending to total bank deposits and lending respectively (**Table 1** and **Table 2**). However, the disparity between the different countries is considerable, with the former Yugoslav Republic of Macedonia displaying a lending euroisation rate of 47% compared to 75% in Serbia[7], and the former Yugoslav Republic of Macedonia as well as Bosnia and Herzegovina a deposit euroisation rate of 43% and 44%, respectively, compared to 75% in Serbia (all September 2015 figures). Euroisation (or rather dollarisation) rates for both lending and deposits are lower in Turkey, although the share of foreign exchange deposits has risen over the past few months.

Table 1

Foreign exchange lending 2008-2015

(% of total loans to non-financial corporations and households)

	2008	2009	2010	2011	2012	2013	2014	Sep-15	Period average
Albania	72.3	69.1	68.5	66.0	62.1	60.6	59.1	56.9	64.3
Bosnia and Herzegovina	73.3	73.9	70.0	66.9	63.1	62.9	62.4	62.1	66.8
FYR Macedonia	…	59.7	60.1	59.9	55.0	51.6	48.1	46.5	54.4
Serbia	…	…	76.3	78.8	78.9	79.0	72.1	74.5	76.6
Turkey	33.2	30.6	30.4	32.0	29.7	32.5	33.2	36.3	32.2

Notes: Figures as of December each year (September 2015, except in the case of Bosnia and Herzegovina which is June 2015). The ratio covers foreign currency-denominated and foreign currency-indexed lending to households and non-financial corporations (private and public). Lending to total economy in the case of Bosnia and Herzegovina due to lack of data. As regards the figures displayed for Serbia, please see explanations in footnote 7.
Sources: Haver Analytics, national central banks and ECB staff calculations.

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[7] Please note that for this and all corresponding figures, the National Bank of Serbia uses a different data series in its regular "Report on the Dinarisation of the Serbian Financial System" which, besides loans, also include other claims such as claims on securities, interest and fees. The displayed loan euroisation rates are slightly lower (71% for September 2015 and 71.5% for the period average as displayed in **Table 1**). However, for reasons of comparability and coherence, the data excluding these items are used in this paper.

Table 2

Foreign exchange deposits 2008-2015

(% of total deposits from non-financial corporations and households)

	2008	2009	2010	2011	2012	2013	2014	Sep-15	Period average
Albania	41.9	44.1	47.6	48.2	48.7	47.8	48.4	49.5	47.0
Bosnia and Herzegovina	50.7	49.4	48.4	46.5	46.4	45.5	43.4	44.0	46.8
FYR Macedonia	49.1	60.8	55.2	52.4	48.2	45.3	42.5	43.1	49.6
Serbia	72.1	74.1	78.6	77.2	79.7	77.6	77.3	77.3	76.7
Turkey	39.8	37.7	33.6	37.6	36.1	40.2	39.9	50.7	39.4

Notes: Figures as of December each year (September 2015, Bosnia and Herzegovina: June 2015). The ratio covers foreign currency-denominated and foreign currency-indexed deposits from households and non-financial corporations (private and public).
Sources: Haver Analytics, national central banks and ECB staff calculations.

4.1.1   Bank assets

Looking at the asset side of banks' balance sheets – where credit to the private sector is the most important item – a substantial share of foreign exchange loans has been granted in euros in Western Balkan countries, whereas the US dollar-denominated borrowing is significant among Turkish companies (see also ECB, 2015). Foreign exchange lending as a share of total lending has fallen between 2009 and 2015 in all countries except Turkey; in the cases of Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia it fell quite substantially, by double digit percentage points. In Serbia, foreign exchange lending to total lending to the non-financial private sector peaked at 80% in March 2012, before falling to 75% in September 2015. In Albania the rate decreased from 69% in 2009 to 57% in 2015, while in Turkey it remained stable at a much lower level than in Western Balkan countries, at around 36%.

Chart 4 depicts this development in relation to GDP in order to get an idea of its magnitude with respect to the economy, showing that foreign exchange lending to GDP stands at around 24% in Turkey (rising), 21% in Albania (falling), 20% in the former Yugoslav Republic of Macedonia (stable) and at around 24% in Serbia (rising slightly after a period of decrease).

Recent developments in currency composition of loans to the private sector

(% of full-year nominal GDP)

Albania

Legend:
- Domestic currency loans
- Foreign currency loans
- Total loans

FYR Macedonia

Legend:
- Domestic currency loans
- Foreign currency loans
- Total loans

Serbia

Legend:
- Domestic currency loans
- Foreign currency loans
- Total loans

Turkey

Legend:
- Domestic currency loans
- Foreign currency loans
- Total loans
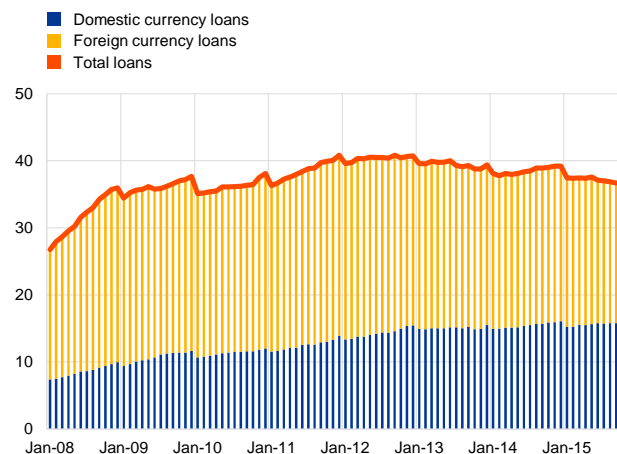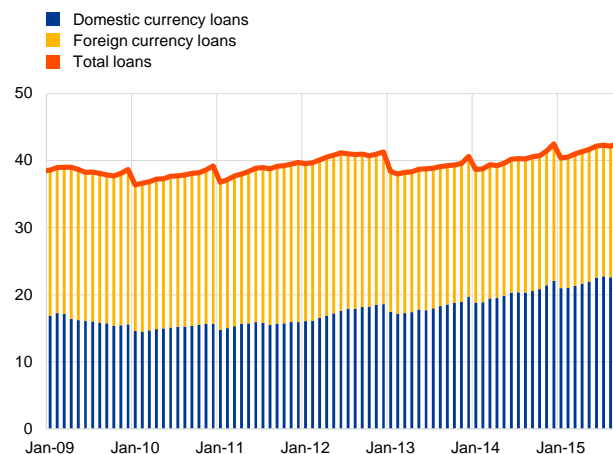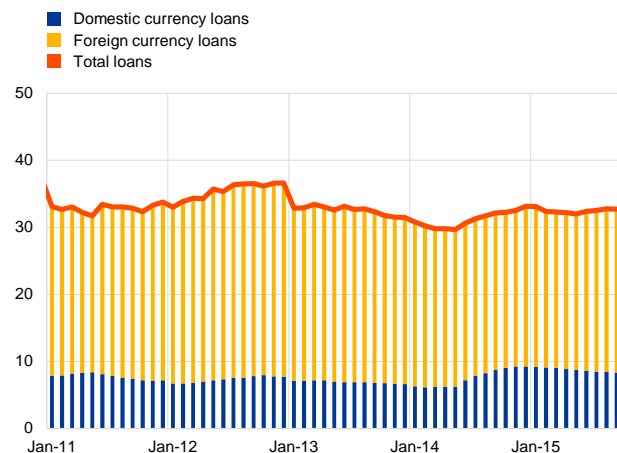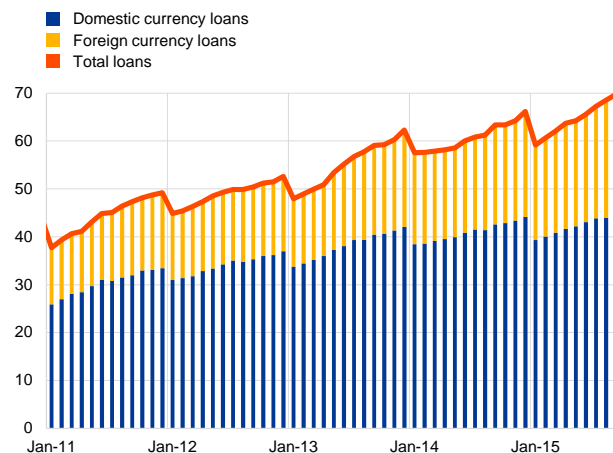
Notes: Private sector here covers lending to households and non-financial corporations. Foreign currency-denominated and foreign currency-indexed lending.
Sources: Haver Analytics, national central banks, IMF/WEO and ECB staff calculations.

Looking at foreign exchange lending trends by sector, this has become more tilted towards corporates (at the expense of households) in EU candidate and potential candidate countries over recent years, especially in Albania and Serbia (see **Table 3**). Notwithstanding the fact that the bulk of foreign exchange lending in Bosnia and Herzegovina takes place through indexed instruments, for which household and corporate data is not available, the share of lending denominated in foreign exchange outright has also dropped markedly among households, in part due to loan reclassifications. Foreign exchange lending to households in Turkey has been banned since 2009. Among highly euroised banking systems, the relative shares of households and corporates in total foreign exchange lending has remained broadly stable in the former Yugoslav Republic of Macedonia.

Table 3

Share of foreign exchange lending to total lending, sectoral breakdown

Households
(In %, outstanding amounts, end-year)

	2009	2010	2011	2012	2013	2014	Sep-15	Period average
Albania	59.8	58.2	56.6	55.3	54.0	51.2	48.8	54.8
FYR Macedonia	47.3	46.0	47.7	47.5	47.6	47.0	46.4	47.1
Serbia	…	79.7	73.6	70.9	67.8	66.0	61.6	69.9
Turkey	2.5	1.3	0.7	0.4	0.3	0.2	0.2	0.8

Non-financial corporations
(In %, outstanding amounts, end-year)

	2009	2010	2011	2012	2013	2014	Sep-15	Period average
Albania	73.7	72.9	69.5	64.4	63.0	61.9	60.0	66.5
FYR Macedonia	68.1	69.4	68.1	60.3	54.6	49.0	46.6	59.4
Serbia	…	73.9	82.6	84.4	88.1	76.9	85.8	81.9
Turkey	46.5	46.5	49.0	45.9	49.1	47.9	50.1	47.8

Notes: Foreign exchange-denominated and foreign exchange-indexed lending. Bosnia and Herzegovina is excluded since the breakdown of foreign exchange indexed lending by institutional sector is not available. As regards the figures displayed for Serbia, please see explanations in footnote 7.
Sources: Haver Analytics, national central banks and ECB staff calculations.

4.1.2   Bank liabilities

On the liability side of the banking sector, customer deposits have an important role in bank funding. Like the asset side, the share of foreign currency denominated deposits to total deposits is high, ranging from 43% in the former Yugoslav Republic of Macedonia to 75% in Serbia (see also **Table 1** above in the introduction to this Section). Within this broad range there have been diverging developments across countries in recent years. In Albania and Serbia the share of foreign currency-denominated deposits in total deposits rose between the end of 2008 and September 2015 (from 42% to 50% in the case of Albania and from 72% to 77% in the case of Serbia, see **Table 2** above), while those of the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina declined over the same period (from 49% to 43% in the case of the former Yugoslav Republic of Macedonia and from 51% to 44% in the case of Bosnia and Herzegovina). In Turkey this ratio remained broadly stable over the period, except for a hike of 10 percentage points in the first nine months of 2015. It is worth noting that those countries where rising foreign exchange deposit ratios are observed are the ones with a floating exchange rate regime (Albania, Serbia and – since 2015 – Turkey) which could be a sign of how difficult it is to build up trust in the domestic currency and monetary institutions in the absence of an external anchor.

Chart 5

Net open position in foreign exchange to capital

(In %)

- Dec-08
- Dec-11
- Dec-13
- Dec-14
- Mar-15
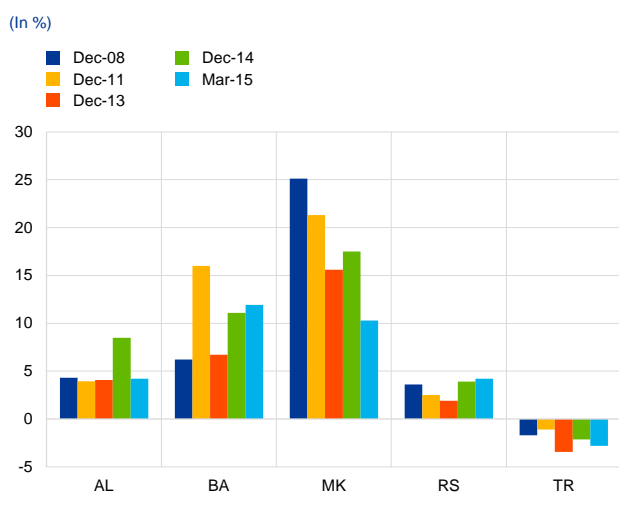
Notes: Last available quarter is December 2014 for Albania and Turkey.
Sources: National central banks

As mentioned in Section 2.2, unofficial euroisation may pose significant market risks to host banking systems in the advent of adverse exchange rate developments. Direct market risks stem from maturity mismatches in banks' balance sheets as net open positions in foreign exchange to capital are relatively low in most countries. This might also be related to the introduction of limits regarding the net open position in the banking sector in the context of the implementation of Basel II prudential requirements. However, in the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina the exposure to these direct market risks is still relatively high (see **Chart 5**). In addition, indirect market risks can occur when the currency positions of households and corporates do not match.

4.2 Key drivers

The persistently high degree of asset and liability euroisation in EU candidate and potential candidate countries can be attributed to a combination of underlying factors, both from the demand and the supply side. Under the first category macroeconomic conditions including the inflation legacy figure prominently, while on the supply side the presence of foreign banks plays an important role, as does the development of local financial markets. The interest rate differential has implications on both sides, as it conditions banks' liability structures and hence helps to determine the currency composition on the asset side, but at the same time it also influences borrowers' preferences.

4.2.1 Inflation legacy and macroeconomic stabilisation

As regards macroeconomic stabilisation, some progress has been made in EU candidate and potential candidate countries, though some deterioration occurred during the recent financial and economic crisis which also undermined the externally-financed and consumption-based growth model prevailing in most cases. Therefore, significant challenges remain and the countries are still highly vulnerable to shocks, whether domestic or external. External imbalances as well as fiscal deficits remain high in most cases, while inflation seems currently under control (except in Turkey), supported by international price developments.[8] None of the Western Balkan EU

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[8] For further details of macroeconomic performance please see the table in Annex 1.

candidate and potential candidate countries has been granted the status of a fully-functioning market economy by the European Commission yet.

Chart 6

CPI inflation

(Year-on-year changes, period averages, 1992-2015)

■ Albania
■ Bosnia and Herzegovina
■ FYR Macedonia
■ Serbia
■ Turkey
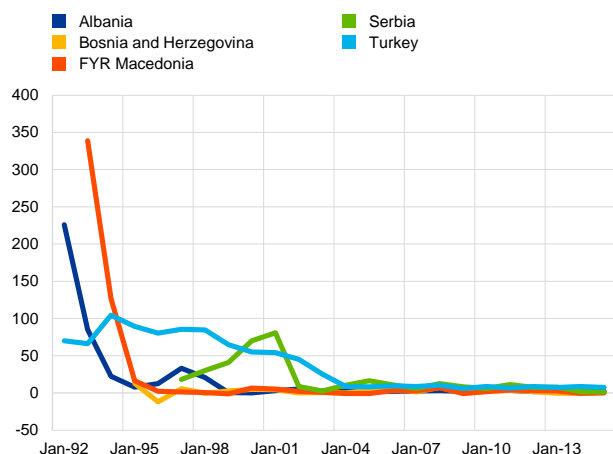
Sources: IMF/WEO and ECB staff calculations.

The wide-spread use of foreign currencies in the Western Balkan countries is to a large extent the legacy of former Yugoslavia and a direct consequence of the economic and political turmoil following its break-up. Many of Yugoslavia's successor states were hit by periods of high or even hyperinflation in the 1990s. Serbia (in the state union with Montenegro and including Kosovo at the time) even displayed one of the most devastating hyperinflation periods of history between October 1993 and January 1995. Estimates suggest that the price increase in that period reached some 5 quadrillion percent ($5*10^{15}$), peaking in January 1994 when the monthly inflation rate was estimated at 313 million percent.[9] Between January 1991 and April 1998, the Yugoslav dinar was officially devalued 18 times (three of which exceeded 99%), and 22 zeros were lopped off. These developments led to a complete (and official) abandoning of the Yugoslav dinar in Montenegro and Kosovo (besides political considerations in the run-up to independence). A period of hyperinflation was also experienced in Bosnia and Herzegovina from April 1992 – January 1994 with the peak of monthly inflation reaching 322% in June 1992 in the Croat-Bosniak Federation and 297 million percent in January 1994 in the Republika Srpska which had pegged its currency to the Yugoslav dinar. In the former Yugoslav Republic of Macedonia, annual inflation peaked at 1,700% in 1992 (see **Chart 6**). However, it was not only the successor states of former Yugoslavia that experienced periods of very high inflation: inflation rates were also high in Albania, where the annual rate peaked at 50% in 1997 after the collapse of financial pyramid schemes that had led to severe political and economic turbulence, as well as in Turkey where it peaked during the financial crises of the mid-1990s at 125% (early 1995) and of the early 2000s at 73% (early 2002).

4.2.2 Confidence and trust

Against the background of the inflation legacy described in the previous sub-chapter, in the 1990s and early 2000s people in the Western Balkans, in the absence of confidence in their (mostly new) domestic currencies, shifted savings into foreign currencies (mainly Deutsche mark and to a lesser extent US dollar) which were perceived as stronger and more stable. The new republics emerging from the former Yugoslavia were small economies in need of transition and with a lack of credible independent monetary history and institutions. Policymakers therefore often opted

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9   This is much higher than the peak of monthly inflation during the German hyperinflation period of the Weimar Republic in the 1920s which was 29,500% in October 1923. The only ever registered higher peaks of hyperinflation periods were in November 2008 in Zimbabwe and in July 1946 in Hungary.

for pegged exchange rates which then reinforced the already prevailing use of foreign currencies (see **Chart 7** for the development of nominal exchange rates).

Chart 7

Nominal exchange rates

(National currency to the euro; index: average 2002 = 100)
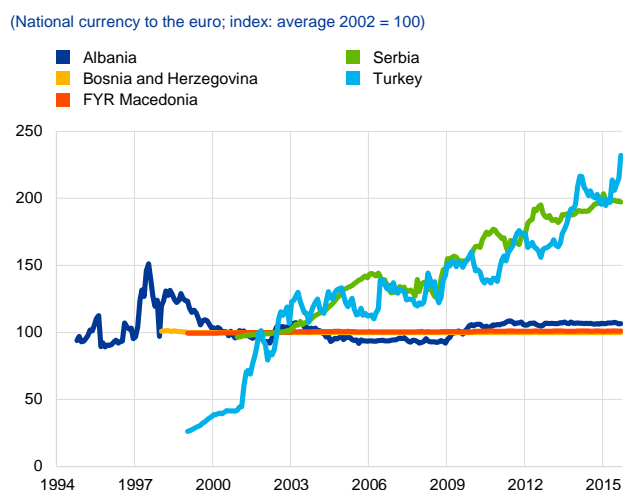
Sources: Haver Analytics, national authorities, Thomson Reuters and ECB staff calculations

According to Beckmann and Scheiber (2012), the relative assessment of the domestic currency will be lower as long as high inflation rates persist or inflation is very volatile. Furthermore, the memory of relatively recent episodes of high inflation continues to shape the preferences for the use of currencies. Research results based on the euro survey conducted semi-annually by the Oesterreichische Nationalbank (OeNB) in EU candidate and potential candidate countries of the Western Balkans confirm that trust in the respective domestic currency is lower than in the euro. However, the overall trend in all countries observed has been positive recently as trust levels have increased over the last four to five years, judging from developments up to the latest available data of autumn 2014. Looking at individual countries, trust levels are lowest in Serbia reflecting the country's inflation legacy and volatility even in recent years. It is also the only country where survey respondents on the whole expect that their domestic currency will not be "very stable and trustworthy over the next five years", as reflected in negative rates in **Chart 8**. On the other hand, this means that, looking forward, the perception of domestic currencies is on the whole positive in Albania, Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia. Furthermore, it is worth noting that the relative trust in the domestic currency versus the euro (see **Chart 9**) increased significantly between 2010 and 2012, i.e. after the outbreak of the euro area sovereign debt crisis. This should probably be seen mainly as a result of a loss of trust in the euro in Western Balkan economies. However, this trend has been reversed since then.

(Normalised sample means per country; -2.5 fully disagree, 0 neutral, 2.5 fully agree)

- Albania
- Bosnia and Herzegovina
- FYR Macedonia
- Serbia
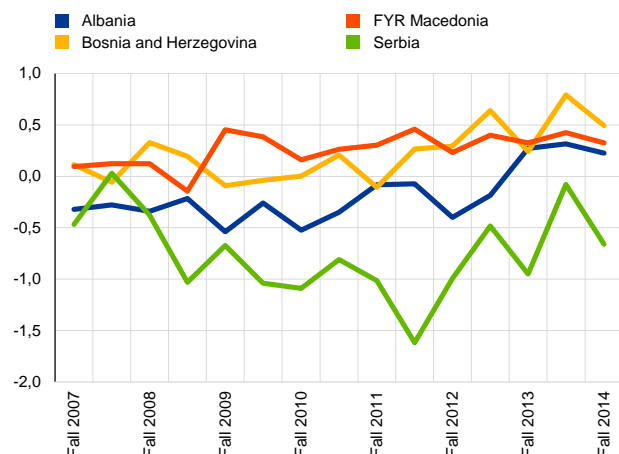
Notes: Respondents were asked whether they agree or disagree on a scale from 1 (strongly agree) to 6 (strongly disagree) with the statement: "Over the next five years, the local currency will be very stable and trustworthy."
Sources: OeNB Euro Survey.

(Difference in normalised sample means per country)

- Albania
- Bosnia and Herzegovina
- FYR Macedonia
- Serbia
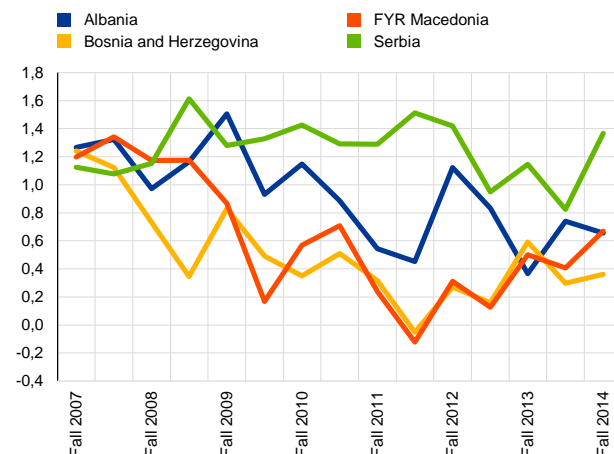
Note: Respondents were asked whether they agreed or disagreed on a scale from 1 (strongly agree) to 6 (strongly disagree) with the statement: "Over the next five years, the euro / national currency will be very stable and trustworthy." Positive entries indicate that the assessment of the stability and trustworthiness of the euro is relatively higher compared to the national currency.
Sources: OeNB Euro Survey.

Low confidence levels in domestic currencies also reflect to some extent low levels of trust in domestic public institutions and political systems. Some of the Western Balkan countries have gone through prolonged phases of political instability and have ample room to further improve the quality of institutions, which is evidenced by e.g. World Bank governance indicators. Sound institutions are key to underpinning stability-oriented macroeconomic policies, which entail more than curbing inflation, where most Western Balkan countries have made significant progress over the past few years. To anchor inflation expectations in countries with a legacy of instability it also appears particularly important to achieve sustainable fiscal and external balances, as otherwise fears of fiscal dominance and currency crisis and thus of a (re-)occurrence of higher inflation may be difficult to counter.

4.2.3   Interest rate differential

Interest rates are usually higher in transition and developing economies than in advanced economies as they bear a higher risk premium associated with the domestic currency on account of a higher country risk (due to macroeconomic performance, political and economic stability, market size, development of financial markets etc.). Therefore, both banks and private sector agents (households and corporates) have an incentive to seek funding in foreign currency, while potentially underestimating foreign exchange risks. When banks' liabilities are in foreign currency the incentive to match this on the asset side is high. Funding in foreign currency (domestic or external) tends to be cheaper, which is passed on to the lending/bank asset side. In that context, the difference in domestic and foreign exchange lending rates has an influence on the development of lending in foreign currencies. As **Chart 10** shows, this seems to be the case particularly in Albania and

the former Yugoslav Republic of Macedonia where the reduction of the interest rate differential was accompanied by a decrease in foreign exchange lending.

Chart 10

Commercial banks' lending rates for foreign exchange and domestic currency loans

(In %)

Albania

- Foreign exchange loans to total loans (lhs)
- Interest rate, foreign exchange loans (rhs)
- Interest rate, domestic currency loans (rhs)
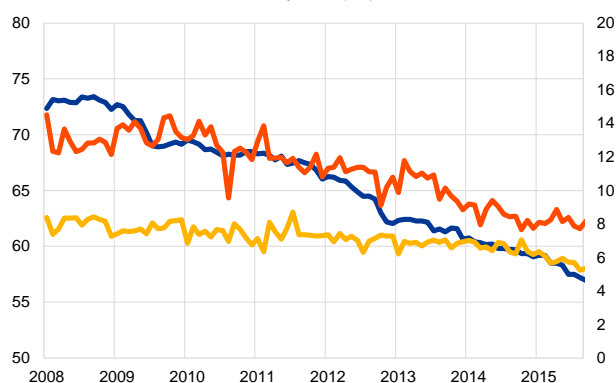
FYR Macedonia

- Foreign exchange loans to total loans (lhs)
- Interest rate, foreign exchange loans (rhs)
- Interest rate, domestic currency loans (rhs)
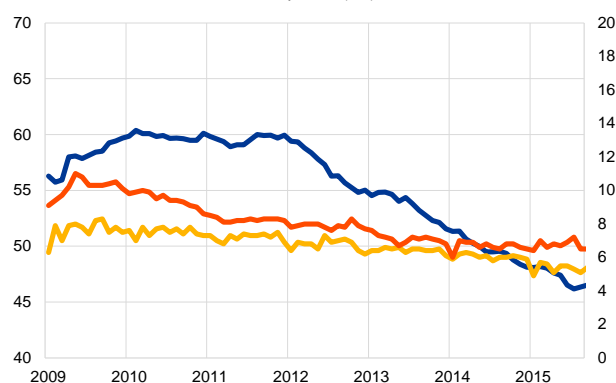
Serbia

- Foreign exchange loans to total loans (lhs)
- Interest rate, foreign exchange loans (rhs)
- Interest rate, domestic currency loans (rhs)
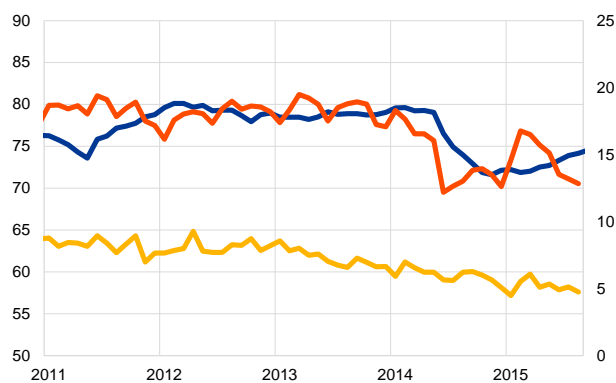
Turkey

- Foreign exchange loans to total loans (lhs)
- Interest rate, foreign exchange loans (rhs)
- Interest rate, domestic currency loans (rhs)
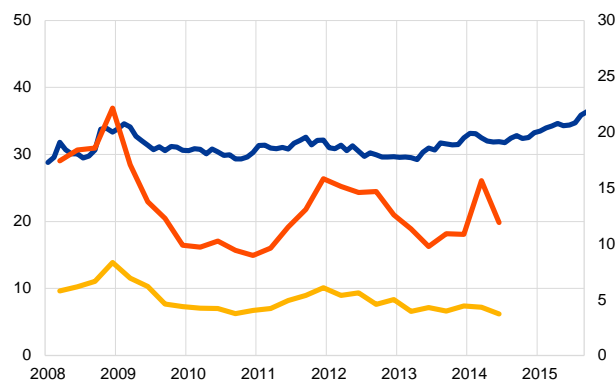
Notes: The ratio foreign exchange lending to total lending refers to the private sector (households and non-financial corporations). Lending rates are a weighted average of lending (new businesses) to households and non-financial corporations. The foreign exchange loans to total loans ratio is calculated using the stock of loans, due to lack of data on new loans in the case of FYR Macedonia. Change in methodology for calculating interest rates in FYR Macedonia as of January 2015, which may cause a slight break in the series.
Sources: National central banks and ECB staff calculations.

4.2.4   Trade integration with the euro area and remittances

EU candidate and potential candidate countries show a high degree of integration with the euro area. Western Balkan countries are all part of the EU's Stabilisation and Association Process and have signed Stabilisation and Association Agreements (SAAs) with the EU and its member states that, among other objectives, aim to reduce trade barriers between the EU and the country concerned. As regards the

countries under consideration, SAAs have entered into force between 2004 (former Yugoslav Republic of Macedonia) and 2015 (Bosnia and Herzegovina).

Trade with the euro area constitutes between 28% of total merchandise trade in Turkey and 60% in Albania (2014 figures), but intra-regional trade is also often invoiced in euros. Remittances from the EU play an important role in financing the current account for the Western Balkan countries, ranging from 8½% of GDP in Albania and Serbia to 18% of GDP in the former Yugoslav Republic of Macedonia (2014 IMF figures).[10] Accordingly, both the corporate sector and private households have income streams in foreign currency with little incentive to convert them into local currency.

4.2.5 Presence of foreign banks

Financial systems in Western Balkan EU candidate and potential candidate countries are characterised by high foreign ownership, mainly from the euro area. The share of euro area-headquartered banks in total banking sector assets in the Western Balkans ranges from close to 50% in the former Yugoslav Republic of Macedonia to just below 70% in Bosnia and Herzegovina and Serbia (figures from national central banks, end-2014).

The entry of foreign banks into the banking sectors of EU candidates and potential candidates has not only increased competition, but is also another contributing factor to the euroisation of deposits and lending, as these banks usually have better access to funding in foreign exchange via their respective parent banks.[11] In recent years there has been a significant correlation between the share of foreign exchange loans to total loans and the share of domestic banking assets owned by subsidiaries of euro area headquartered banks in total assets (see **Chart 11**). Only for Turkey and to a lesser extent Serbia does this correlation seem to be slightly weaker. However, it needs to be noted that euroisation in an environment with a large presence of foreign banks is less risky for financial stability than would otherwise be the case, precisely because foreign banks have easier access to "hard currency" in international markets.

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[10] In Turkey, the percentage is considerably lower.

[11] This finding is also supported by literature: Farnoux et al. (2004) show for Poland that foreign banks tend to issue foreign exchange credits more often than domestic institutions and point to the more aggressive marketing strategies of these banks. Boissay et al. (2006) believe that foreign banks use better risk management techniques than local institutions which boosts credit growth in CEE. In addition, competition is enhanced which in turn leads to lower interest rates and thus accelerates lending growth. Moreover, foreign banks may benefit from superior funding opportunities due to their parent institutions (see also ECB 2006). Luca and Petrova (2008) and Basso et al. (2007) blame foreign banks' desire for currency-matched portfolios beyond regulatory requirements for the rise in foreign exchange lending in transition economies.

Chart 11

Foreign exchange lending and banking sector assets, 2008 and 2014

x-axis: share of euro area headquartered banks' assets in total assets (%)
y-axis: share of foreign currency loans to total loans (%)

December 2008

Bosnia and Herzegovina

Serbia

Albania

FYR Macedonia

Turkey

$y = 1,9299x - 64,685$
$R^2 = 0,8608$

December 2014

Bosnia and Herzegovina

Albania

Serbia

FYR Macedonia

Turkey

$y = 1,543x - 32,307$
$R^2 = 0,8352$
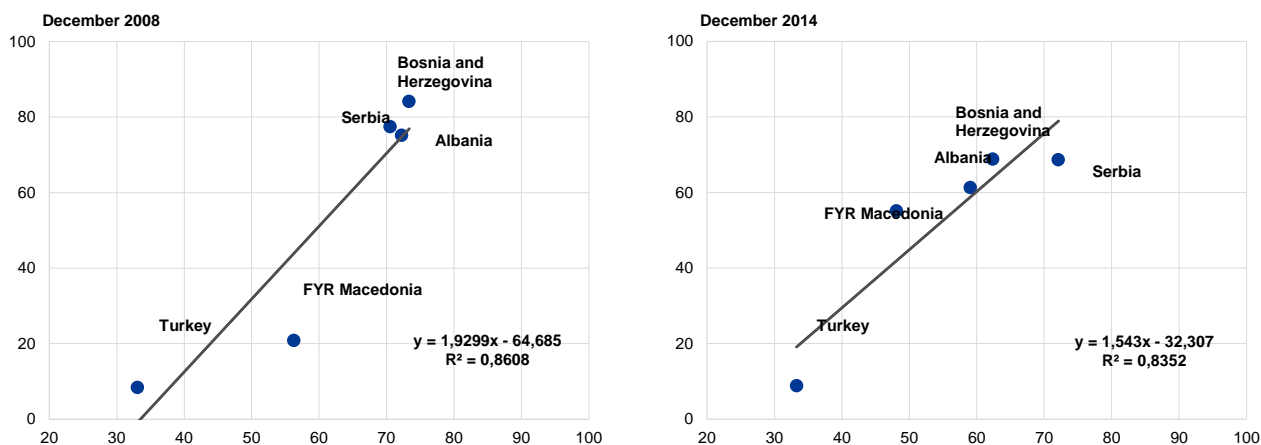
Notes: Foreign currency-denominated and foreing currency-indexed loans. Lending to non-financial private sector; lending to total economy in the case of Bosnia and Herzegovina since the breakdown of foreign exchange-indexed lending is not available by institutional sector. January 2009 in the case of FYR Macedonia since time series prior to 2009 do not include foreign currency-indexed lending.
Sources: Bankscope, national central banks and ECB staff calculations.

4.2.6 EU and euro area accession perspective

The countries of the Western Balkans received a clear EU membership perspective at the EU-Western Balkan Summit in Thessaloniki in June 2003. Since then, Croatia has joined the Union while Albania, the former Yugoslav Republic of Macedonia, Montenegro and Serbia have received candidate country status. This means that, unlike other dollarised regions, including the country cases presented in chapter 3, there is potential for the official introduction of the euro since future EU members are also expected to participate in monetary union as part of the acquis. Coupled with the other factors described above, this prospect may further influence economic agents' decision to use the euro already. In this context, it is worth recalling again that this analysis is about the private use of the euro in parallel to the domestic currency ("unofficial euroisation") which is fully distinct from "official euroisation" (as unilaterally introduced by the authorities in Montenegro and Kosovo).

4.3 Regulatory and other measures to reduce unofficial euroisation

While the existence of unofficial euroisation and the drawbacks of this phenomenon are widely acknowledged in EU candidate and potential candidate countries, it is only in Serbia that authorities have so far explicitly engaged in an official de-euroisation (or "dinarisation") strategy in which both the National Bank of Serbia (through reserve requirements, micro and macroprudential and other measures) and government authorities (i.a. through issuing dinar-denominated debt as well as tax

and subsidy policies) commit to supporting a regulatory and macroeconomic environment conducive to the use of the domestic currency. To that end, the National Bank of Serbia and the Serbian government signed a Memorandum of Understanding on the "Dinarisation of the Serbian Financial System" in 2012 whose main elements are detailed in **Box 1** below. Nevertheless, all EU candidate and potential candidate countries have undertaken a number of efforts in recent years that have the potential to mitigate the downsides of unofficial euroisation for financial stability and the conduct of monetary policy. While they have not been openly and primarily targeted at bringing euroisation rates down in all cases, it is possible to define a broad range of measures that have this desired (side-)effect.[12]

Box 1
Main elements of the March 2012 Memorandum of Understanding between the National Bank of Serbia and the Serbian government on the "Strategy of Dinarisation of the Serbian Financial System"

The Memorandum on the "Strategy of Dinarisation of the Serbian Financial System" defines the objectives, measures and activities to be taken with a view to strengthening confidence in the national currency and promoting its use in the financial system. Activities related to the implementation of the dinarisation strategy are classified into three groups: a) monetary and fiscal policy measures geared at strengthening the macroeconomic environment by delivering low and stable inflation through a managed floating exchange rate, alongside durable economic growth; b) the development of a market of dinar securities; and c) the development of foreign exchange hedging instruments.

The National Bank of Serbia will support the process of dinarisation through reserve requirements, prudential and other measures. In the event of a structural dinar liquidity shortage, the National Bank stands ready to use all monetary policy instruments at its disposal to supply dinars at the key policy rate which ensures the achievement of the inflation target. The National Bank will make every effort to create an institutional and regulatory environment that will contribute to the development of primary and secondary markets of dinar securities. In collaboration with competent institutions, the National Bank will work on the creation of conditions for the further development of existing and the introduction of new foreign exchange hedging instruments.

The Government will support dinarisation particularly by investing further effort into raising the share of pure dinar debt in total public debt. The Government will engage in subsidised loan financing for dinar-denominated loans and support saving in dinars through tax incentives. The Government will make every effort to create an institutional and regulatory environment which will contribute to the development of primary and secondary markets of pure dinar securities, simplification of procedures and a reduction in costs of secondary trading in government securities. Whenever market and overall macroeconomic conditions permit, the Government will favour borrowing in

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[12] It is worth noting that following the hyperinflation period and the wars of the 1990s, Western Balkan countries made significant efforts towards macroeconomic stabilisation (in some cases in the context of an IMF stabilisation programme) while in parallel undergoing the transition towards market economies. As described above, macroeconomic stabilisation is a necessary condition to bring euroisation rates down. However, efforts to that end are typically not targeted at euroisation per se but pursue broader objectives. Hence, this paper focusses on prudential measures and efforts to develop local capital markets.

dinars without any form of currency clause. This will imply exerting an active influence on the activities of local governments and public enterprises. Together they will endeavour to use market instruments to hedge against the foreign exchange risk whenever possible and economically justified. To finance budgetary needs, the Government will develop and implement a medium-term public debt management strategy with the aim of reducing public sector exposure to exchange rate risk. In line with the strategy and market trends, the Government will issue longer-term dinar bonds, both in the domestic and international financial markets, and thus contribute to the development of primary and secondary markets of dinar securities.

4.3.1 Prudential measures

Primarily, prudential measures have been introduced which are partly related to the Basel II rules. In addition to the minimum capital and market transparency requirements, these rules have foreseen a supervisory review process the aim of which is to adjust and further develop banks' methods of risk management and internal control by covering external factors such as the influence of cyclical developments as well as risk areas that are not or not fully taken into account when computing the minimum capital requirements (e.g. interest rate risks in the banking book and uncertainties in measuring operational risks). **Table 4** provides an overview of prudential measures which – while also serving to more generally enhance financial stability – have been taken in order to reduce euroisation, to minimise risks stemming from foreign exchange lending and to incentivise local currency savings.

Table 4

Prudential measures to reduce euroisation

Measure	Country and description
CEILINGS ON FOREIGN EXCHANGE EXPOSURE	
Limits to the net open foreign exchange position as a percentage of banks capital	Albania since 2010 Regulation No. 48/2010 on open foreign exchange positions risk management: rules and criteria for the calculation, monitoring, reporting and the supervision of the banks' open foreign exchange positions, in order to manage the foreign exchange risk. Bosnia and Herzegovina Banks may hold foreign currency positions up to 30% of their regulatory capital. With the aim of managing the foreign exchange risk of banks, the following limits apply to the foreign exchange operations of banks relative to tier 1 capital: 30% in total, 30% for individual foreign exchange positions in euros, and 20% for individual foreign exchange positions. Former Yugoslav Republic of Macedonia since 2009 A bank's aggregate net open foreign exchange position at the end of any business day should not exceed 30% of the bank's own funds. Serbia 2007; 2011 The limit on banks' net open foreign exchange position was lowered from 30% to 20% in 2007. It was further tightened to the level of 10% in 2009, before being raised to the current level of 20% in 2011. Turkey since 1999 Total net foreign exchange position was gradually reduced from 50% to 20% (including also foreign exchange indexed assets and liabilities); since 2002 net open position in foreign exchange is limited to 20% of the institute's own funds for all foreign currencies.
Debt-to-income limit more favourable on domestic currency debt	Serbia 2010-2012 In 2010 the following debt-to-income limits for foreign exchange loans were put in place: 30% (40%) for individuals exposed to high (low) foreign exchange risks for non-mortgage loans and 50% (60%) for individuals exposed to high (low) foreign exchange risks for mortgage loans. These ceilings were increased in 2011 to 80% (high risk) and 100% (low risk) for mortgage loans, and then abolished fully at the end of 2012 when the Serbian credit cycle was in down phase.
Loan-to-value limit for foreign exchange mortgage loans	Serbia since 2011 A loan-to-value limit for foreign exchange mortgage loans borrowed by individuals of 80% applies. There is no such limit for loans in domestic currency.
Mandatory down payment for foreign exchange or indexed loans	Serbia since 2011 Down payment or placement of deposits of no less than 30% of the loan amount as a requirement for the approval of foreign exchange denominated or indexed loans to individuals.
REGULATIONS REGARDING RESERVE REQUIREMENTS	
Reserve requirement more favourable on domestic currency liabilities	Former Yugoslav Republic of Macedonia since 2009; 2015 Deposits in denars are subject to a reserve requirement of 8%, deposits indexed to foreign currency to 20%, and deposits denominated in foreign currency to 15% (previously all were subject to 10%). The reserve requirement ratio on banks' liabilities to households in local currency with a contractual maturity of above one year is equal to 0% (as of September 2015). Serbia 2015; 2016 Required reserves rates are differentiated by currency and by maturity of liabilities included in the required reserves base. Rates for domestic currency liabilities are 5% (maturity up to two years) and 0% (maturity over two years), while the corresponding rates for foreign exchange liabilities are 23% and 16% (20% and 13% as of February 2016), respectively. Turkey 2008 The reserve requirement is 6% for liabilities in local currency (later lowered to 5%) against 9% for foreign currency denominated deposits. This second rate was lowered from 11% in December 2008.
Reserve requirement in local currency for foreign exchange deposits to attract local currency deposits	Serbia 2015 Banks may hold 38% (for liabilities with maturity of up to two years) and 30% (for liabilities with maturity over two years) of their foreign exchange required reserves in dinars.
Prohibition of new foreign exchange loans in currencies other than the euro	Serbia since 2011 Foreign exchange denominated or indexed loans for individuals in currencies other than the euro have been banned.
LIQUID ASSET REQUIREMENTS	
Foreign exchange currency assets liquidity requirement	Albania since 2013 Regulation No. 71/2013 on liquidity risk management i.a. redefines and strengthens the definition of "liquid assets" and establishes minimum required levels for the ratio of liquid assets to short term liabilities, in total and for Albanian lek, euro and US dollar. For total, the minimum level of the ratio should be 20%, for each currency the level is 15%. Former Yugoslav Republic of Macedonia 2009-2011 Between 2009 and 2011, minimum liquidity requirements were differentiated by currency. Turkey 2007 The foreign exchange liquidity ratio, which is the ratio of foreign exchange assets to foreign exchange liabilities, must be at least 80%. Asset and liability account calculations take into account liquidity capacity and demand features.
PROVISIONING REQUIREMENTS	

Tighter provisioning requirements for foreign exchange loans	Albania 2008; 2010; 2013 Loans in foreign currency to un-hedged borrowers bear a 50% higher risk coefficient factor than loans in local currency and the total of loans in foreign currency to un-hedged borrowers should not be higher than 400% of the regulatory capital of the bank (since 2008). Loans in foreign currency granted for nonfinancial entities outside the country bear a risk coefficient of 150% for the purpose of calculating the risk weighted capital of the bank (since 2010). Any increase in net investments with non-resident financial institutions or securities bears a risk coefficient of 100% (normally this varies from as low as 20% to higher values).

Sources: Kokenyne et al (2010), IMF AREAR reports, national central banks.

In addition, in order to gauge the relative preparedness of EU candidate and potential candidate countries to align themselves at an early stage with standards which will become binding upon accession, the 2013 ESCB expert group on financial stability challenges in EU candidate and potential candidate countries conducted a survey on the respective countries' compliance with ESRB recommendations on foreign exchange lending. This survey was updated in 2015. The results of these surveys show that most EU candidate and potential candidate countries already have some rules in place which comply with parts (but not all) of the sub-recommendations of the ESRB (see **Box 2** and, for more details, **Annex 2**).

Box 2
Overview of compliance with the ESRB recommendation on foreign exchange lending of 21 September 2011 (ESRB/2011/1)[13]

Recommendation A: Risk awareness of borrowers

Financial institutions shall provide borrowers with adequate information regarding the risks involved in foreign currency lending, including on the impact on instalments of a severe depreciation of the domestic currency, and to offer customers domestic currency loans for the same purposes as foreign exchange loans.

In Albania and Serbia, banks have to inform the client about the exchange rate risk related to a foreign exchange-credit. In Serbia, banks are obliged to offer their service to individual clients in dinars, unless the individual requests that it be offered in a foreign currency.

Recommendation B: Creditworthiness of borrowers

Foreign exchange loans shall be given only to borrowers that are able to withstand adverse shocks in the exchange rate and in the foreign interest rate throughout the lifetime of the loan. In addition more stringent underwriting standards (debt service-to-income, loan-to-value ratios) shall be set up.

In Albania, the former Yugoslav Republic of Macedonia and Serbia banks have to provide a detailed analysis not only of the creditworthiness of the borrower but also of its ability to withstand adverse exchange rate movements. In Serbia, a loan-to-value limit of 80% is prescribed only for foreign exchange mortgage loans borrowed by individuals. In Turkey, households are not allowed to lend in foreign currency or index to foreign currency.

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[13] Please note that Bosnia and Herzegovina is not covered in this overview due to lack of specific information.

Recommendation C: Credit growth induced by foreign exchange lending

National supervisory authorities shall monitor whether foreign exchange lending induces excessive credit growth as a whole and, if so, adopt new, more stringent rules.

Serbia applies stricter rules on foreign exchange lending and forces banks to hold higher reserves for foreign exchange denominated and indexed loans. In Albania, quantitative restrictions on lending in general have been in place since 2007. The central banks of the former Yugoslav Republic of Macedonia and of Turkey vigilantly monitor developments regarding foreign exchange lending.

Recommendation D: Internal risk management

Financial institutions shall better incorporate foreign exchange lending risks in their internal risk management systems, namely in terms of internal risk pricing and internal capital allocation.

The former Yugoslav Republic of Macedonia and Turkey have special regulations on foreign exchange lending incorporated in the internal risk management of the banks. In the former Yugoslav Republic of Macedonia, banks that face material risk arising from their foreign exchange lending activities have to fulfil higher capital requirements. In Serbia, banks are obliged to assess the foreign exchange risk on the debtor's financial standing and creditworthiness, and in particular analyse the adequacy of the debtor's cash flows relative to the changed level of credit liabilities. The authorities in Albania intend to implement ICAAP soon.

Recommendation E: Capital requirements

Supervisors should require institutions to hold adequate capital to cover risks associated with foreign exchange lending by taking measures under Pillar II of the Basel II revised framework.

The issue of holding adequate capital to cover the risk stemming from foreign exchange lending has been incorporated in national regulations in the former Yugoslav Republic of Macedonia, Serbia and Turkey.

Recommendation F: Liquidity requirements

National supervisory authorities are recommended to monitor funding and liquidity risks in connection with foreign exchange lending, in particular (i) maturity and currency mismatches between assets and liabilities; (ii) the reliance on foreign exchange swap markets; and (iii) the concentration of funding sources. They should limit the exposure, while avoiding a disorderly unwinding of current financing structures.

In Albania, banks are required to measure, control and monitor bank liquidity for each foreign currency that considerably affects the overall liquidity of the respective bank. Minimum required levels of liquid assets, in relation to respective short-term liabilities, are demanded for domestic and major foreign currencies. In the former Yugoslav Republic of Macedonia, banks are required to monitor their liquidity position separately for domestic and foreign currencies. The authorities in Serbia commit the banks to diversify their funding sources and currencies. In Turkey, banks are

obliged to have higher liquidity coverage ratios for foreign exchange liabilities and claims as for items in national currency.

Recommendation G: Reciprocity

The measures on foreign exchange lending of the home authority should be at least as stringent as those of the host. Furthermore, to enhance cooperation, all current and new measures to address foreign exchange lending should be communicated to all relevant home supervisors, EBA and EBRD and be published in the home authorities' website.

So far, no similar regulations on reciprocity are in place in EU candidate and potential candidate countries.

4.3.2   Development of local capital markets

Chart 12

Market capitalisation

(In % of nominal GDP)

■ 2008	■ 2012
■ 2009	■ 2013
■ 2010	■ 2014
■ 2011	
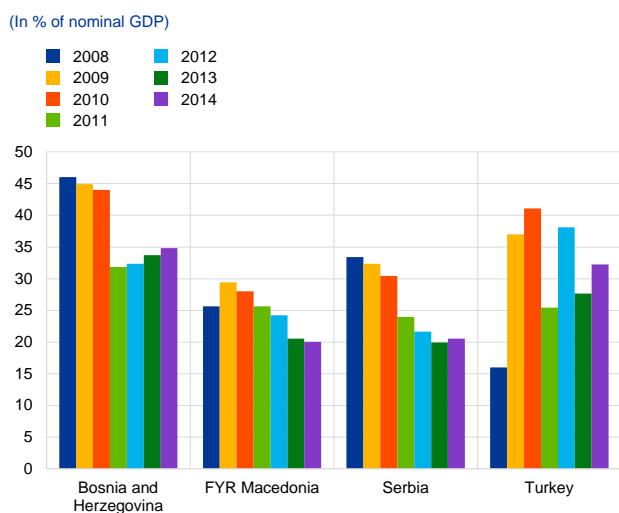
Notes: Figures are as of December of each year and comprise market capitalisation of both listed and unlisted companies (due to missing data on listed companies only). Albania is excluded due to lack of data. In the case of Bosnia and Herzegovina, figures depict the sum of the activity on the two entities' stock exchanges (Federation and Republika Srpska).
Sources: Bloomberg, IMF/WEO, national stock markets and ECB staff calculations.

Nonbank financial intermediaries and capital markets in Western Balkan countries (unlike in Turkey) are generally shallow, reflecting the countries' low income levels and lagging institutional development. While bank deepening has increased in the Western Balkans since the early 2000s on the back of the growing presence of foreign banks, other parts of the financial sector remain underdeveloped. The system is highly bank-based and corporate bond markets are practically non-existent, largely because of a lack of liquid secondary government securities markets and weak bankruptcy frameworks (IOSCO 2011). While stock markets have emerged in all Western Balkan economies (except for Albania and Kosovo), their turnover and capitalisation as well as the number of listed companies are low (see **Chart 12** and note that figures are somewhat blurred to the upside as – for reasons of data availability – they include unlisted companies).

Given the level of development of local capital markets, governments tend to issue debt in EUR or USD. However, in the last few years several countries started issuing t-bills (and bonds) in their domestic currency. This was particularly the case in Serbia and the former Yugoslav Republic of Macedonia, where governments increased issuance of local currency denominated government securities, as **Chart 13** shows (see in particular the graph on the left hand side). Overall, it can be noted that the governments of Albania, the former Yugoslav Republic of Macedonia and Turkey have been active in issuing bonds and bills in local currency. While in Albania and Turkey, the level of annual issuances of local currency-denominated bonds and bills has been high and somewhat stable over

recent years (between 30% and 40% of nominal GDP in Albania, and between 5% and 20% of nominal GDP in Turkey, respectively), it has considerably increased in the former Yugoslav Republic of Macedonia and Serbia (see graph on the right hand side in **Chart 13**).

Chart 13

Total government securities issued in domestic currency per year
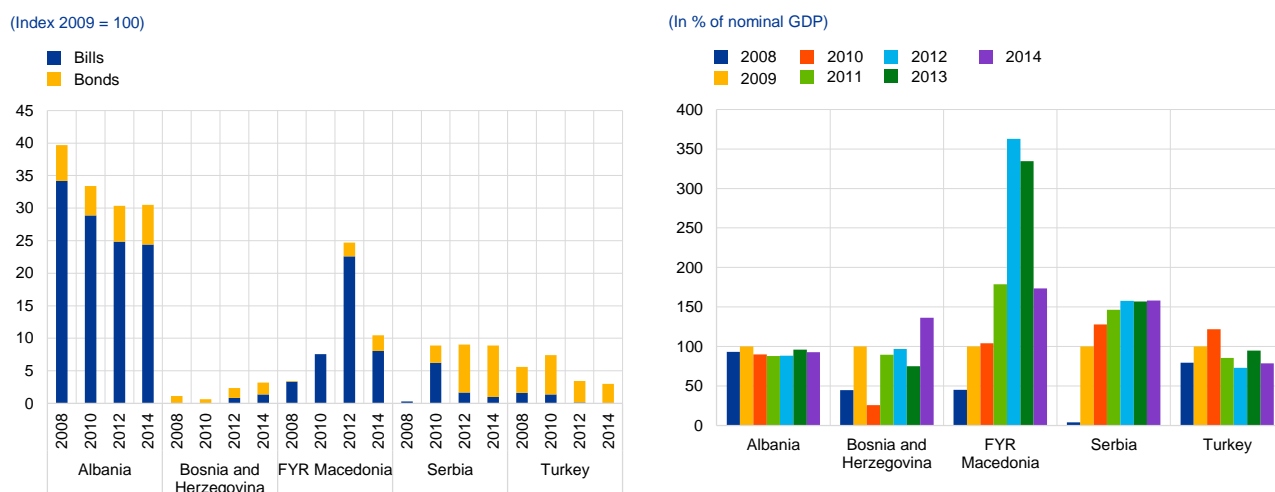
(Index 2009 = 100)

(In % of nominal GDP)

Notes: Figures include securities indexed to inflation and to foreign currency. The above figures depict the total amount issued per year.
Sources: IMF/WEO, national central banks and ECB staff calculations.

Furthermore, it can also be observed that governments have tried to lengthen the maturities of securities issued. As **Chart 14** shows, the former Yugoslav Republic of Macedonia and Serbia in particular have increasingly issued medium to longer-term bonds at the expense of short-term bills. In Bosnia and Herzegovina the development displays a more mixed pattern due to the more volatile issuing behaviour of the two entities that form the country.[14]

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[14] Albania is excluded due to lack of data.

Chart 14

Developments in maturities of general government securities issued in domestic currency

(In % of nominal GDP)

Bosnia and Herzegovina

- <1y
- 1y≤x<5y
- 5y≤

FYR Macedonia

- <1y
- 1y≤x<5y
- 5y≤

Serbia

- <1y
- 1y≤x<5y
- 5y≤
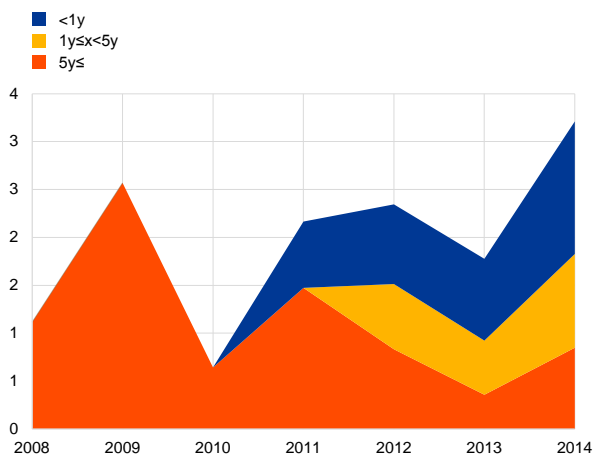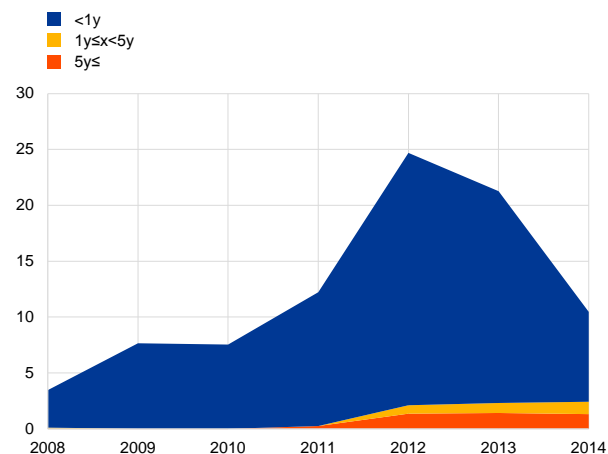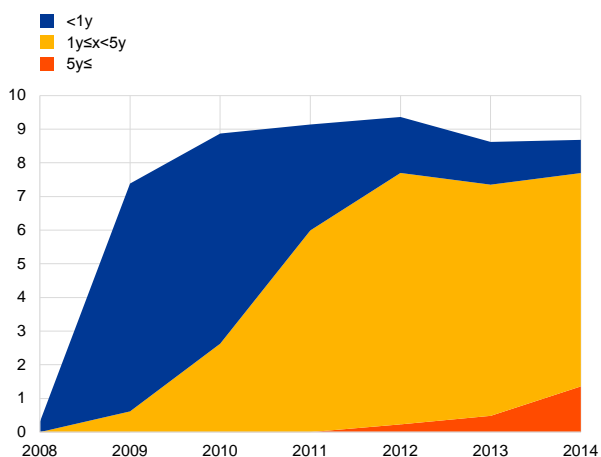
Turkey

- <1y
- 1y≤x<5y
- 5y≤

Notes: Figures include securities indexed to inflation and to foreign currency. The above figures depict the total amount issued per year. Albania is excluded due to lack of data. In the case of Bosnia and Herzegovina, figures depict the sum of securities issued by the two entities (Federation and Republika Srpska).
Sources: IMF/WEO, national central banks and ECB staff calculations.

In the context of the European Bank Coordination ("Vienna") Initiative, a working group on local currency and capital market development was established which found in its closing report from 2011 that the development of local currency capital markets can in principle provide savings vehicles and the stable sources of funding that are needed to sustain local currency lending (EBRD 2011). Besides strengthening macroeconomic stability and the acceptance of the local currency as well as increasing the availability of local currency savings, the development of funding markets in local currency, particularly at longer maturities, is mentioned as a crucial element. In that context, the Initiative recommends in particular shifting sovereign debt management toward local currency within an appropriate macroeconomic framework, building up a full yield curve and helping to develop a

secondary market for bonds as a reference for the loan market. Governments can play an active role in that regard, not only by issuing local currency-denominated debt, but also by broadening the access of small-scale savers to the financing instruments issued by the government. Low face values of these instruments and tax incentives could be considered in that regard. Tax benefits in the form of preferential treatment for long-term local currency savings and lending instruments can potentially play a role in building a local currency yield curve. Developing a public bond market may also be conducive to developing a local corporate bond market. However, it is not only supply side considerations that are important, but also the demand side needs to be developed, i.e. local institutional investors who are interested in purchasing medium- and long-term financial assets in the local currency. Hence, regulatory frameworks and market conditions that help the evolution of non-bank financial institutions such as insurances and pension funds are crucial for establishing local currency capital markets.

5   Conclusions

Success in bringing high euroisation rates down over recent years has been mixed in the region. In Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia rates have declined both for lending and deposits, while in Albania they only fell on the lending side and slightly increased on the deposit side. In Serbia, which exhibits the highest level of euroisation in the region, the euroisation rate started to fall on the lending side in 2013, whereas on the deposit side it is relatively stable. Rates have also remained fairly stable in Turkey, albeit at a significantly lower level than in all other countries observed.

While clear causalities between measures taken and a reduction in the eurosiation rates are difficult to establish, some conclusions can be drawn. Enhancing the use of local currencies tends to be a long-lasting and cumbersome process as it targets the behaviour of economic agents and involves confidence-building efforts which usually do not yield short-term successes. In general, success factors can be grouped in three categories: macroeconomic stabilisation, prudential regulations and the development of capital markets in domestic currency.

Evidence as well as literature findings seem to suggest that macroeconomic stabilisation backed by sound and credible institutions, including independent central banks, supportive of disinflation and effectively anchoring inflation expectations, help to bring euroisation rates down. This can be seen as a necessary condition, the "conditio sine qua non". To anchor inflation expectations in countries with a legacy of instability it also appears particularly important to achieve not only low inflation for an extended period but also sustainable fiscal and external balances. Otherwise fears of fiscal dominance and currency crisis and thus of a (re-)occurrence of higher inflation may be difficult to counter.

As regards exchange rate policies, results are not that clear-cut, as on the one hand literature and evidence from the three case studies of successful de-dollarisation (Israel, Poland, Peru) seem to suggest that higher nominal exchange rate flexibility in the context of inflation-targeting regimes is favourable in a de-dollarisation/de-euroisation context. In these cases, extended periods of domestic currency appreciation paired with disinflationary processes had been crucial to fostering de-dollarisation by breaking deeply-entrenched public perceptions that currency fluctuations were always a one-way street detrimental to the relative value of the domestic currency. On the other hand, EU candidate and potential candidate countries with fixed exchange rate regimes seem to score somewhat better in terms of de-euroisation than their floating peers. It could be argued in that context that a fixed peg inspires the confidence of depositors in the local currency and its relative value vis-à-vis the euro (while at the same time it may instil a false sense of security for borrowers in foreign currency as regards the future value of their liabilities in local currency).

It is evident that a growth-friendly environment with low and stable inflation helps to increase confidence in local currencies and thereby reduce euroisation, while past

(hyper-)inflation legacies and continued inflation volatility are detrimental to this end. This is shown in particular by the case of Serbia. The country displays comparatively high and volatile inflation rates as well as high external and fiscal imbalances. As a consequence, euroisation rates are relatively high and in view of the magnitude of the problem, Serbian authorities have adopted an explicit dinarisation strategy. At the other end of the spectrum, the former Yugoslav Republic of Macedonia benefits from comparatively low and stable inflation rates, paired with relatively lower external imbalances and a more moderate degree of government indebtedness. Hence, euroisation levels and trends are also more favourable.

Macroeconomic stabilisation is, however, not sufficient. It needs to be accompanied by well-calibrated regulatory and prudential measures which create incentives to internalise the risks of euroisation and which can serve as a catalyst for increasing the use of the domestic currency. There is a wide variety of possible measures in that regard, including those described in the 2011 ESRB recommendation on foreign exchange lending. While the focus is usually on the lending side, measures that create incentives for saving in domestic currency should also be taken into account. Though to different degrees, EU candidates and potential candidates have engaged in implementing such prudential measures even though, particularly as regards the ESRB recommendation, more could still be done. Circumstances may vary between countries and their financial systems as the country cases in chapter 3 have also shown, so the measures that are suitable for each particular case will have to be thoroughly established. Overall, the former Yugoslav Republic of Macedonia, Albania and Serbia have been relatively active in implementing regulatory and prudential measures aimed at lowering foreign exchange lending.

Last but not least, the development of local capital markets is an important ingredient of a strategy to foster the use of local currency. Governments can play an active role in that process by increasing the local currency share of government borrowing or issuing inflation-indexed government bonds and increasing the liquidity and expanding maturities in government bond markets, with the aim of establishing a complete yield curve in local currency. While currently in most of the countries observed banks hold the largest shares of government securities, usually until maturity, it is important to also develop conditions that are favourable for the evolution of secondary markets where these securities are also traded by other market players such as local institutional non-bank investors, in order to diversify the demand side. Such a market and regulatory environment should also be conducive to the development of a corporate bond market in local currency. In Albania the level of annually issued local currency-denominated governments bonds and bills in terms of (nominal) GDP has been the most stable and the highest in the region in recent years, while the former Yugoslav Republic of Macedonia and Serbia have also increasingly issued government securities denominated in local currency.

While the optimal and realistic level of euroisation in EU candidate and potential candidate countries in the Western Balkans will be higher than zero given factors such as close trade and financial linkages as well as the prospect of EU accession, it has also become obvious in the analysis that current levels are too high in view of the disadvantageous effects they have on the effectiveness of monetary policy and

in terms of financial stability risks. A set of policies aimed at ensuring lasting macroeconomic stability, a prudential and regulatory framework that fosters the use of local currencies, and the development of local currency capital markets have the potential to gradually reduce unofficial euroisation rates and thus seem warranted in Western Balkan economies.

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Annex 1
Selected macroeconomic indicators

Indicator	Period	Albania	Bosnia and Herzegovina	FYR Macedonia	Serbia	Turkey
Real GDP growth (annual % change)	Average 2002-2008	5.8	5.2	4.3	6.0	5.9
	2009	3.4	-2.7	-0.4	-3.1	-4.8
	2010	3.7	0.8	3.4	0.6	9.2
	2011	2.5	1.0	2.3	1.4	8.8
	2012	1.6	-1.2	-0.5	-1.0	2.1
	2013	1.4	2.5	2.7	2.6	4.2
	2014	1.9	1.1	3.8	-1.8	2.9
	2015	2.7	2.1	3.2	0.5	3.0
Inflation (period average, annual % change)	Average 2002-2008	3.1	2.8	2.2	9.7	16.6
	2009	2.3	-0.4	-0.6	8.1	6.3
	2010	3.6	2.1	1.7	6.1	8.6
	2011	3.4	3.7	3.9	11.1	6.5
	2012	2.0	2.0	3.3	7.3	8.9
	2013	1.9	-0.1	2.8	7.7	7.5
	2014	1.6	-0.9	-0.1	2.1	8.9
	2015	2.2	0.5	0.1	1.6	7.4
Current account balance (% GDP)	Average 2002-2008	-9.2	-14.5	-6.2	-11.5	-4.0
	2009	-15.9	-6.6	-6.8	-6.2	-2.0
	2010	-11.3	-6.2	-2.0	-6.4	-6.2
	2011	-13.2	-9.6	-2.5	-8.6	-9.7
	2012	-10.2	-8.9	-3.0	-11.5	-6.2
	2013	-10.7	-5.8	-1.8	-6.1	-7.9
	2014	-13.0	-7.7	-1.3	-6.0	-5.8
	2015	-13.2	-7.7	-3.2	-4.0	-4.5
General government net lending/borrowing (% GDP)	Average 2002-2008	-4.4	-0.5	-0.8	-1.1	-5.0
	2009	-6.6	-5.4	-2.6	-3.6	-6.0
	2010	-3.5	-4.1	-2.4	-3.7	-3.4
	2011	-3.5	-2.8	-2.5	-4.1	-0.6
	2012	-3.4	-2.7	-3.8	-6.8	-1.7
	2013	-5.2	-1.9	-3.9	-5.3	-1.3
	2014	-5.4	-3.0	-4.2	-6.3	-1.0
	2015	-5.1	-1.6	-4.0	-3.9	-0.8
General government	Average 2002-2008	57.2	25.8	31.9	52.9	54.3

gross debt (% GDP)	2009	59.7	35.8	23.8	36.0	46.1
	2010	57.7	39.1	24.1	43.7	42.3
	2011	59.4	39.7	27.7	46.6	39.1
	2012	62.0	43.6	33.7	58.3	36.2
	2013	70.1	41.6	34.2	61.4	36.1
	2014	72.5	44.8	38.2	72.2	33.6
	2015	73.3	45.5	37.1	76.7	32.1
Nominal exchange rate (index 2009=100, period average)	Average 2002-2008	96.2	100.0	100.4	124.0	120.4
	2009	99.8	100.0	100.5	154.8	150.6
	2010	104.1	100.0	100.9	169.6	139.4
	2011	106.0	100.0	100.9	168.0	162.8
	2012	105.0	100.0	100.9	186.2	161.4
	2013	106.0	100.0	101.0	186.4	177.1
	2014	105.8	100.0	101.1	193.2	203.6

Sources: IMF/WEO, Haver Analytics, national authorities and ECB staff calculations.

Annex 2
EU candidate and potential candidate countries: compliance with ESRB recommendation of 21 September 2011 (ESRB/2011/1)

COUNTRY	SUBSEQUENT REGULATION	IMPLEMENTATION
RECOMMENDATION A: RISK-AWARENESS OF BORROWERS		
ALBANIA	In the regulation "On the transparency of banking product and services", approved in August 2008, there is a provision that obliges banks to inform clients about the risks of adverse movements in foreign exchange and interest rates as follows: In the process of disbursement of the loan for the first time or at the time of its restructuring, banks should offer to the borrower a written comment, that stresses the risks the borrower can face: a) if the loan is in foreign exchange, especially if the borrower revenues are not in foreign exchange and the exchange rate fluctuates adversely; b) if the reference rate of the loan increases.	August 2008
BOSNIA AND HERZEGOVINA[15]	Law on Changes and Amendments to the Law on Banks ("Official Gazette of Republika Srpska" No. 116/11), Article 98	November 2011
FYR MACEDONIA	Banks are obliged to give adequate information to borrowers prior to extending a loan, but there is no requirement to give special information related to the risks specific to foreign exchange loans.	2011
SERBIA	Law on the Protection of Financial Services and Consumers: Article 15 stipulates that when advertising its services where the advertising message indicates an interest rate or any figures relating to the price of the product or the income it generates, the bank and the lessor shall specify clearly and precisely, by means of a representative example a) the effective interest rate; and b) the currency in which the deposit/credit/leasing is agreed. Article 17 stipulates that the bank and the lessor shall indicate to the consumer in writing the risks (s)he assumes when the service is provided in the dinar equivalent value of a foreign currency and/or in a foreign currency; that the offer which is supplied on the prescribed form shall include: a) the currency in which the deposit/credit/leasing is agreed and b) the level and variability of the nominal interest rate. The Article further stipulates that the bank and the lessor shall offer their service to the consumer in dinars, unless the consumer requests the service to be offered in the dinar equivalent value of a foreign currency and/or in a foreign currency, in accordance with the regulations governing foreign exchange operations.	2011
RECOMMENDATION B: CREDITWORTHINESS OF BORROWERS		
ALBANIA	Regulation of "Credit Risk Management" determines that when granting the loan the bank must analyse the exposure of the borrower to foreign exchange risk. In addition, all foreign exchange loans where the borrower has a foreign exchange risk, must not exceed 400% of the amount of regulatory capital, both on an individual and consolidated basis, or otherwise must reduce the value of regulatory capital for the excess amount. Furthermore, the said regulation refers to the other regulation "On Risk Weighted Capital", where the foreign exchange loans where the borrower faces foreign exchange risk, is weighted with 150% risk factor for the calculation of RWC (higher capital requirements). There is not currently an explicit requirement for banks underwriting standards referring to debt service-to-income or loan-to-value ratios (see "Recommendation C" for more details). In practice though, banks use such ratios for their credit granting. More generally, the regulation "On credit risk management", requires that banks have in place strategies, policies and internal procedures that should contain the criteria for granting loans to different borrowers, including their creditworthiness. In addition, banks should evaluate on an on-going basis their exposure to credit risk via the development of stress tests, considering the possible effect that changes in risk factors can have on the quality of the loan portfolio and on the financial performance of the bank.	September 2009
BOSNIA AND HERZEGOVINA	Decision on Minimum Standards for Recording Bank's Loan Activities ("Official Gazette of Republika Srpska" No. 12/03) prescribes minimum standards, which the bank should observe when extending loans, other placements, or investments, and taking over potential obligations.	March 2003
FYR MACEDONIA	Decision on credit risk management This Decision regulates the conditions under which banks can extend foreign exchange denominated and indexed loans. It requires banks i.a. to have written policy and procedures for the management of the induced credit risk. These internal acts should i.a. include a) criteria for the assessment of the (mis-)match of clients' foreign exchange assets and liabilities; b) foreign exchange exposure limits; c) regular stress-testing of the foreign exchange risk (at least on an annual basis). The Decision furthermore defines criteria related to the borrower's creditworthiness. Among other criteria (such as client's character, solvency and liquidity position, profitability, etc.), banks are required to take into account the client's exposure to foreign exchange risk.	2013
SERBIA	Decision on the Classification of Bank Balance Sheet Assets and Off-Balance Sheet Items: Section 21: Receivables from a natural person borrower who is illiquid, insolvent or failing to implement a financial consolidation	2015

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[15] Please note that information as regards Bosnia and Herzegovina displayed in this table is only available from one of the two entities that comprise the country, namely the Republika Srpska.

	plan, or who had gone further into debt after the restructuring of his/her liabilities will be classified in category D (91 to 180 days past due receivables).	
	Section 26: Assessment of the creditworthiness of a natural person borrower (other than farmer or entrepreneur) shall be performed based in particular on the analysis of: a) the debt-to-income ratio, determined as the ratio of total monthly credit obligations and regular net monthly income, which ratio the bank shall determine when approving the loan, as well as thereafter in accordance with the manner and dynamics defined in its internal act; and b) the currency structure of the borrower's total monthly credit obligations, particularly taking into account higher risk exposure of a borrower whose obligations are contracted in foreign currency or in dinars with a foreign currency clause.	
	Decision on reporting requirements for banks ("RS Official Gazette" Nos. 125/2014 and 4/2015)	2015
	Paragraph 2 stipulates the obligation for banks to prepare and deliver a report on borrowing/lending and deposit taking/placement as well as a daily report on the bank's foreign exchange risk ratio.	
	Law on the protection of financial service consumers	2011
	Article 18 determines that before entering into a an agreement on a credit, authorised overdraft facility, issuing and use of a credit card or leasing, the bank and/or lessor shall assess the consumer's creditworthiness on the basis of data furnished by the consumer and by consulting the database on consumer indebtedness subject to consumer's prior written consent.	
TURKEY	A regulation prevents firms that do not have foreign exchange income from obtaining foreign exchange denominated loans from domestic banks unless the maturity of the loan is greater than one year and the size of the loan is greater than USD 5 million, whereas firms with foreign exchange income are entitled to obtain foreign exchange denominated loans. Individual households may obtain neither foreign exchange denominated nor indexed loans from the domestic banking sector. Furthermore, the amount of a loan extended for commercial real estate purchase shall be limited to 50 % of the value of the real estate subject to collateral.	2009

RECOMMENDATION C: CREDIT GROWTH INDUCED BY FOREIGN CURRENCY LENDING

ALBANIA	The amendments of 2006 to the regulation "On credit risk management" asked those banks that were expanding their loan portfolio faster than defined limits (in terms of annual expansion of loan portfolio, but also in relation to loan portfolio weight in the total asset of the bank), to use 150% risk factor for the calculation of the risk weighted capital. Hence, they had to have more capital to sustain their balance sheet expansion. As most of the expansion was happening through foreign currency loans, this measure was also intended to discourage banks from lending in foreign currency. In addition, as part of their credit risk measures, banks were asked to use and maintain an LTV ratio of up to 70%, and maintain a Payment-to-(disposable) Income ratio of up to 25%. With further amendments in 2008 and 2009, a risk weight of 150% should be applied to bank exposures created by granting loans to customers outside the country's territory where the banks operate through their subsidiaries, branches and agencies. Furthermore, the regulation "On banks' minimum reserve requirements" held with Bank of Albania was revised in July 2008, reducing to 0% the interest rate used for remuneration of reserve requirement in USD and Euro.	December 2006 September 2008
FYR MACEDONIA	The National Bank of the Republic of Macedonia (NBRM) is constantly monitoring and analysing changes in the level of foreign exchange lending in the banking system, for example in the NBRM's quarterly reports on the Macedonian banking system.	Unspecified
SERBIA	Decision on Banks' Required Reserves with the National Bank of Serbia, Section 5: Differentiated ratios to calculate required reserves are applied to domestic and foreign currency liabilities. 5% and 0% are applied on the portion of the dinar base composed of liabilities maturing in less/more than two years; whereas the corresponding ratios on the portion of the foreign currency base composed of liabilities maturing in less/more than two years are 23% (20% as of February 2016) and 16% (13% as of February 2016). By way of exception, a 50% ratio is applied on the portion of the foreign currency base composed of foreign currency clause-indexed dinar liabilities.	2011
	Law on the National Bank of Serbia ("RS Official Gazette" Nos. 72/2003, 55/2004, 85/2005) Article 14 stipulates that the Executive Board shall determine measures and activities aimed at maintaining and strengthening the stability of the financial system. This provision is the basis for the introduction of macroprudential instruments for limiting the systemic foreign exchange risk. Measures adopted so far include a loan-to-value limit of 80% for mortgage loans that are indexed to a foreign currency or in foreign currency, the prohibition of loans indexed to a foreign currency other than the euro and the obligatory down payment or placement of deposits of no less than 30% of the loan amount for foreign currency denominated or indexed loans approved to natural persons.	
TURKEY	The Central Bank of Turkey continuously monitors credit growth and takes measures to prevent excessive credit growth in order to limit credit risks in the financial system.	Unspecified

RECOMMENDATION D: INTERNAL RISK MANAGEMENT

ALBANIA	Bank of Albania plans to address the respective guidelines in the ICAAP document (as part of Pillar II), that will enter into force after the implementation of Pillar I.	Unspecified
FYR MACEDONIA	The Decision on risk management prescribes the general guidelines to the banks on risk management systems. As part of this Decision, banks are required to develop and implement an internal capital adequacy assessment process, which should cover all material risks the bank is or could be exposed to. As a result, if the bank, or the National Bank, determines that risk arising from foreign exchange lending is material, the bank should determine a higher capital requirement. The NBRM's credit risk supervisory approach i.a. takes into consideration the influence of all other risks, such as interest rate risk, foreign exchange risk and price risk (changes in the value of collateral) on the level of credit risk. It is prescribed that in the credit approval process, institutions must take into consideration the impact of these risks on the credit risk profile of a borrower. Institutions should have in place procedures that will enable the identification of the above-mentioned risks and take them into consideration when deciding to advance credit to certain counterparties. In approving credit exposures to residents in foreign currencies or when credit exposures are in denar with a foreign exchange clause, institutions should perform stress test analysis that will show the effects of possible changes in foreign exchange rates on the borrower's overall credit standing and evaluate the borrower's ability to repay its debts as agreed (e.g. devaluation of at least 20% of the local currency against the currency in which the loan is financed). Institutions should have in place written policies and procedures that will address their approach in assessing the risks related to this type of lending and the institution's approach in monitoring and measurement of the credit risk inherent in these types of credit exposures.	2008
SERBIA	Decision on risk management by banks ("RS Official Gazette" Nos. 45/2011, 94/2011, 119/2012, 123/2012, 23/2013) Paragraph 44 stipulates that for lending negotiated in a foreign currency or in dinars with a foreign currency clause, a bank shall assess the credit foreign exchange risk, i.e. the effect of a change in the dinar exchange rate on the debtor's financial standing and creditworthiness, and shall in particular analyse the adequacy of the debtor's cash flows.	2011; 2012; 2013
	Decision on measures for preserving stability of the financial system in the context of foreign currency-indexed loans ("RS Official Gazette" Nos. 21/2015 and 51/2015) is adopted for more adequate bank risk management and better protection of consumers of	2015

	loans indexed to a foreign currency, who are affected by negative international foreign exchange market movements.	
TURKEY	The "Regulation on internal systems of banks" was first issued by the Banking Regulation and Supervision Agency in February 2001, then updated in November 2006 and finally revised in June 2012 in line with Basel II. The purpose of this Regulation is to lay down procedures and principles concerning internal control, internal audit and risk management systems to be established by banks and the functioning of these systems.	2012

RECOMMENDATION E: CAPITAL REQUIREMENTS

ALBANIA	This issue will be covered by Pillar II framework. However according to the existing framework, Bank of Albania has the right (and has done so in practice several times) to ask banks to increase their capital if its level is considered insufficient to cover all the risks that the banks are exposed to. This provision has been included in the "Capital Adequacy Regulation" since November 2001.	Unspecified
FYR MACEDONIA	The regulations on risk management (both from 2008 and 2011) require banks to have in place adequate Internal Capital Adequacy Assessment Process (ICAAP), which will enable identification, measurement or assessment of all material risks the bank is exposed to and determination of adequate levels of capital. This requirement includes all material risk, including the risk associated with foreign exchange lending, if this risk is material for the bank's operation. Banks are required to perform ICAAP at least annually and at each significant change in their risk profile.	2011
SERBIA	Decision on risk management by banks Paragraph 20. A bank shall be required to implement the internal capital adequacy assessment process, i.e. to determine the amount of internal capital requirements in accordance with its risk profile and to carry out its distribution. Paragraph 22. A bank shall be required to continuously implement documented internal capital adequacy assessment process consistent with the nature, volume and complexity of the bank's activities, in accordance with risk management strategy and policies and with the capital management strategy. Paragraph 24. A bank shall establish a methodology setting out quantitative and qualitative criteria on the basis of which it identifies materially significant risks to be included in the internal capital adequacy assessment process, taking into consideration the type, volume and complexity of its activities, as well as the specific features of the markets in which it operates. To identify the risks referred to above, a bank shall be required to analyse (among others) risks that are not fully encompassed by minimum capital requirements, including credit-foreign exchange risk. A bank shall provide documented explanation of its decision not to include certain risks in the internal capital adequacy assessment process.	2011
	Decision on capital adequacy of banks ("RS Official Gazette" Nos. 46/2011, 6/2013 and 51/2014) Paragraph 4 stipulates that the National Bank of Serbia may set a higher capital adequacy ratio for a bank than 12% if it is established that this is necessary for the stable and safe operation of the bank and/or fulfilment of obligations to its creditors. Decision on capital adequacy of banks Paragraph 368 stipulates that a bank shall calculate capital requirements for foreign exchange risk if the sum of its overall open foreign exchange position and its net position in gold exceeds 2% of its total own funds. The related capital requirement shall be calculated by multiplying the sum of its overall open foreign exchange position and its open net position in gold by 12%. Paragraph 371 stipulates that the ratio between the total net open foreign exchange position (including the absolute value of the net open position in gold) and the bank's capital cannot exceed 20%.	2011; 2013; 2014
TURKEY	Turkey began implementing Basel II with the "Regulation on Measurement and Evaluation of Capital Adequacy of banks" published in the Official Gazette dated 28 June 2012. According to this Regulation, the banks are obliged to calculate the capital adequacy for exchange rate risk upon their whole foreign exchange assets and liabilities as well as their derivative financial instruments including exchange rate risk, under the standard approach. Within the aim of calculating the capital adequacy, net positions related to all foreign exchange assets and liabilities within active and passive accounts by each foreign exchange type are to be found. Net short positions and net long positions found for each foreign exchange type are accumulated separately and among these, a capital adequacy by 8% is calculated based on the total of the biggest one by absolute value and net gold position by absolute value. Another regulation related to containing the currency risk of the banking sector is that the absolute value of the weekly simple average of the ratio of foreign currency net general position to own funds cannot exceed 20%. The ratio is applied both on a consolidated and non-consolidated basis.	2012

RECOMMENDATION F: LIQUIDITY REQUIREMENTS

ALBANIA	The regulation "On liquidity risk management" requires from banks: a) the daily measurement, control and monitoring of bank liquidity and on clearly defined spans; b) the measurement, control and monitoring of bank liquidity for each foreign currency, which considerably affects the overall liquidity of the bank, on individual and aggregated basis; c) the monitoring of liquidity indicators consistency with the limits set out for the exposure against liquidity risk; d) the derivation of data to calculate liquidity indicators and the preparation of reporting forms accomplishing the needs of steering organs of the bank and of other persons included in liquidity management risk; e) deposits concentration ratios and the monitoring of their stability. The regulation also requires form banks to identify, access and manage liquidity risk based on the following elements: a) the principles of liquidity risk assessment; b) the planning and monitoring of inflows and outflows; c) the establishment and maintenance of an adequate maturity structure; d) the monitoring of funding sources and their concentration; For the purpose of avoiding breaching the limits set by the Bank of Albania, the regulation presents a list of some early warning indicators that banks should deal with carefully.	2009 Revised in 2011
BOSNIA AND HERZEGOVINA	Decision on Minimum Standards for Bank's Foreign Exchange Risk Management and Decision on Changes and Addition to the Decision on Minimum Standards for Bank's Foreign Exchange Risk Management (Official Gazette of Republika Srpska Numbers 12/03, 53/03, 85/04) prescribe restrictions in foreign exchange activities related to core capital.	March 2003
FYR MACEDONIA	Banks are required to monitor and report to the National Bank on a monthly basis separately for denar and foreign exchange positions a) the contractual maturity of banks' assets and liabilities in 5 time buckets (0-7 days, 8-30 days, 31-90 days, 91-180 days and 181-365 days); and b) the expected maturity of banks' current and planned assets and liabilities in 3 time buckets (0-7 days, 8-30 days and 31-90 days).	2011
SERBIA	Decision on Risk Management by Banks: Paragraph 30. A bank shall be required to determine and maintain an adequate level of liquidity reserves in accordance with the analysis of maturity mismatch in its balance-sheet liabilities and receivables and off-balance sheet items (gap analysis) for predetermined periods, including one-day period. A bank shall be required to ensure liquidity risk management in aggregate form, by all currencies, and individually, by major currencies, to ensure stability and diversification of sources of financing, resolution of temporary and long-term liquidity crises and timely and adequate action in cases of increased liquidity risk.	2015

	Decision on reporting requirements for banks ("RS Official Gazette" Nos. 125/2014 and 4/2015) Paragraph 2 stipulates the obligation for a bank to prepare and deliver daily reports on the bank liquidity ratio, the bank's foreign exchange risk ratio and on the planned transactions and projections of liquid funds which contains cash flow currency composition as well as projection of the foreign exchange position of the bank.	2014; 2015
TURKEY	In Turkey, as a liquidity standard there is the "Regulation on Measurement and Evaluation of Liquidity Adequacy of Banks", which was published by the Banking Regulation and Supervision Agency and was put into effect in 2007. Banks in Turkey must adhere to three liquidity adequacy ratios in accordance with this Regulation. The terms for the calculation of the first and second ratios are one week and one month, respectively. Total liquid assets plus total cash inflows with a remaining maturity of up to one week/month divided by total cash outflows with remaining maturity up to one week/month should be greater than or equal to 100% for all domestic currency items, whereas foreign exchange liquid assets plus foreign exchange cash inflows with a remaining maturity up to one week/month divided by foreign exchange cash outflows with remaining maturity up to one week/month should be greater than or equal to 80%. In both ratios a haircut is applied on liquid assets and cash inflows and cash outflows are multiplied by a run off factor. The third ratio is calculated by dividing the most liquid assets by main on balance sheet liabilities. This ratio, unlike the other two, has to be met in a common currency (that is liquidity needs in foreign currency is not separately considered) and should not be less than 7%. The foreign exchange liquidity ratios are used to monitor build-up of maturity and currency mismatches between assets and liabilities. Banks report their total and foreign exchange liquidity ratios every week. If the first two ratios are less than the minimum requirements, banks are obliged to send a justification. It is obligatory to eliminate any noncompliance for the first ratio within the next two weeks. No more than six instances of non-compliance may be realised concerning the first ratio within a calendar year. Non-compliance may not take place concerning the second ratio twice in a row within a calendar year.	2007

RECOMMENDATION G: RECIPROCITY

ALBANIA	In the regulation "On consolidated supervision", approved in July 2005, there are some provisions about the way that the Bank of Albania exchanges data and information with other supervisory and regulatory authorities. Among others, it is mentioned that: The Bank of Albania is entitled to request and send reports, data and information, to the supervisory authorities of other countries, if they are necessary for consolidated supervision on the basis of the agreement of cooperation and understanding, signed by the respective parties.	July 2005

Sources: National central banks.

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