

Lending in foreign currencies as a systemic risk

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The phenomenon of loans extended in, or indexed to, foreign currencies (hereinafter “forex loans”) in central and eastern European countries is interesting in terms of macro-prudential policy for at least three reasons. First, forex loans represent an example of a situation where the sum of individually rational actions creates a collectively damaging risk – a market failure creating systemic risk. The presence of this market failure substantiates the use of public policy, and was one of the arguments supporting the issuance of ESRB Recommendation 2011/1. Second, the history of regulatory actions taken by individual countries prior to the current crisis, and their rather poor results, is a strong indication that the policy toolkit available for addressing systemic risks should be broad, so that tools can be selected according to the specific characteristics of the risk. National authorities should be allowed to choose the best policy mix for their particular circumstances. The severity of systemic risks can differ from country to country, as financial cycles and the structural characteristics of financial systems typically differ between countries, and thus may require a different policy response. Third, in the environment of the single European market, international cooperation and reciprocity from home authorities are crucial elements in ensuring the effectiveness and efficiency of supervisory actions.

With the establishment of the European Systemic Risk Board (ESRB), an institutional framework for macro-prudential policy has been put in place at the European level. The forex loans issue shows that the ESRB’s role as a coordinator is of key importance for the efficiency of macro-prudential policies in the European Union.

Keywords: European Systemic Risk Board, ESRB, foreign currency lending, systemic risk, macro-prudential policy, recommendation, regulatory arbitrage

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1 INTRODUCTION

The phenomenon of loans extended in, or indexed to, foreign currencies (hereinafter “forex loans”), taken out by unhedged borrowers in central and eastern European countries (CEECs), is interesting in terms of macro-prudential policy for at least three reasons. First, forex lending provides an example of a market failure, where the sum of individually rational actions creates a collective risk. Second, the history of regulatory actions and their rather limited results before 2010/2011 indicate that the policy toolkit available for addressing systemic risks should be broad, so that tools can be selected according to the specific characteristics of the risk. Third, regulatory arbitrage in the environment of the single European market shows that international cooperation and reciprocity from home authorities are crucial to ensuring the effectiveness and efficiency of supervisory actions.

2 ORIGINS OF FOREX LENDING IN CENTRAL AND EASTERN EUROPE

Forex loans and risks associated with foreign currency indebtedness are not a new phenomenon. These risks materialised during periods of financial turmoil, both in emerging as well as developed economies (e.g. Mexico and Australia). Historically, one common driver of forex lending was a significant interest rate differential in favour of forex loans for the clients. Significantly lower interest rates on forex loans than on domestic currency loans were usually a cause of strong demand for forex loans, once their supply appeared. The underlying exchange rate risks were usually underestimated, especially in countries with peg or currency board regimes. Expectations of a quick entry into the euro area were another factor contributing to the underestimation of exchange rate risks in countries which joined the European Union (EU) in 2004 and 2007.

Local currency interest rates in CEECs were consistently higher than in developed economies during the Great Moderation of the mid-2000s, in line with stronger potential economic growth and higher inflation rates in CEECs. This interest rate differential was a key driver of foreign exchange lending, but was accompanied by numerous facilitating factors.

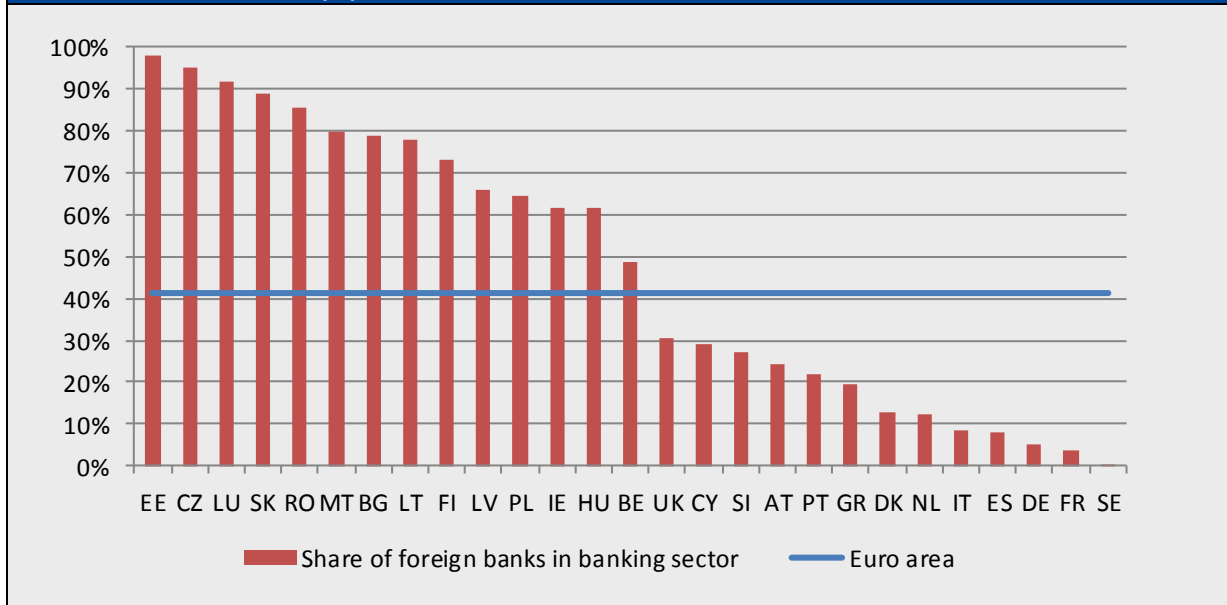
The growing presence of foreign banks in CEECs was a structural factor that facilitated the supply of forex lending. As a result of privatisation processes, foreign investments and restructuring, many banks in CEECs became subsidiaries of internationally active institutions. Large European banking groups, who in some cases also operated through branches (see Chart 1), became the dominant investors. Their easy access to international funding allowed them to provide foreign currency funding to their subsidiaries. This has been to a large extent motivated by higher profitability of credit activities in catching-up economies and the pursuit of higher market shares in those countries. A large share of foreign-owned banks in domestic financial sectors of the CEECs has thus created an additional channel of capital inflows, directed mainly to credit markets¹. The high share of foreign-owned banks in the CEECs’ financial sectors, together with their

¹ Empirical studies offer no clear answer to the role of foreign banks in forex lending. M. Brown and R. de Haas (“Foreign Currency Lending in Emerging Europe – Bank-Level Evidence”, European Banking Center Discussion Paper 2010-31, 2010), using data for years 2001-2004 find that foreign banks did not extend forex loans on a larger scale than domestic banks. On the other hand, C. Rosenberg and M. Tirpak (“Determinants of Foreign Currency Borrowing in the New Member States of the EU”, IMF Working Paper WP/08/173, 2008) find that besides the interest rate differential, capital inflows also contributed to forex lending. These inflows were facilitated by increased openness of CEECs after the accession to the EU and took also the form of parent company funding. Supervisory bank-level data on forex mortgage lending indicate that at least in some countries (Hungary and Poland, in particular) foreign-owned banks were the ones which introduced this product to the market.

substantial growth potential, contributed to a build-up of competition pressures in the credit markets, mainly concentrated on the housing loan market.

Chart 1: Importance of foreign banks in EU Member States

Share of foreign-controlled subsidiaries and foreign-controlled branches in banking sector assets as of June 2011 (%)



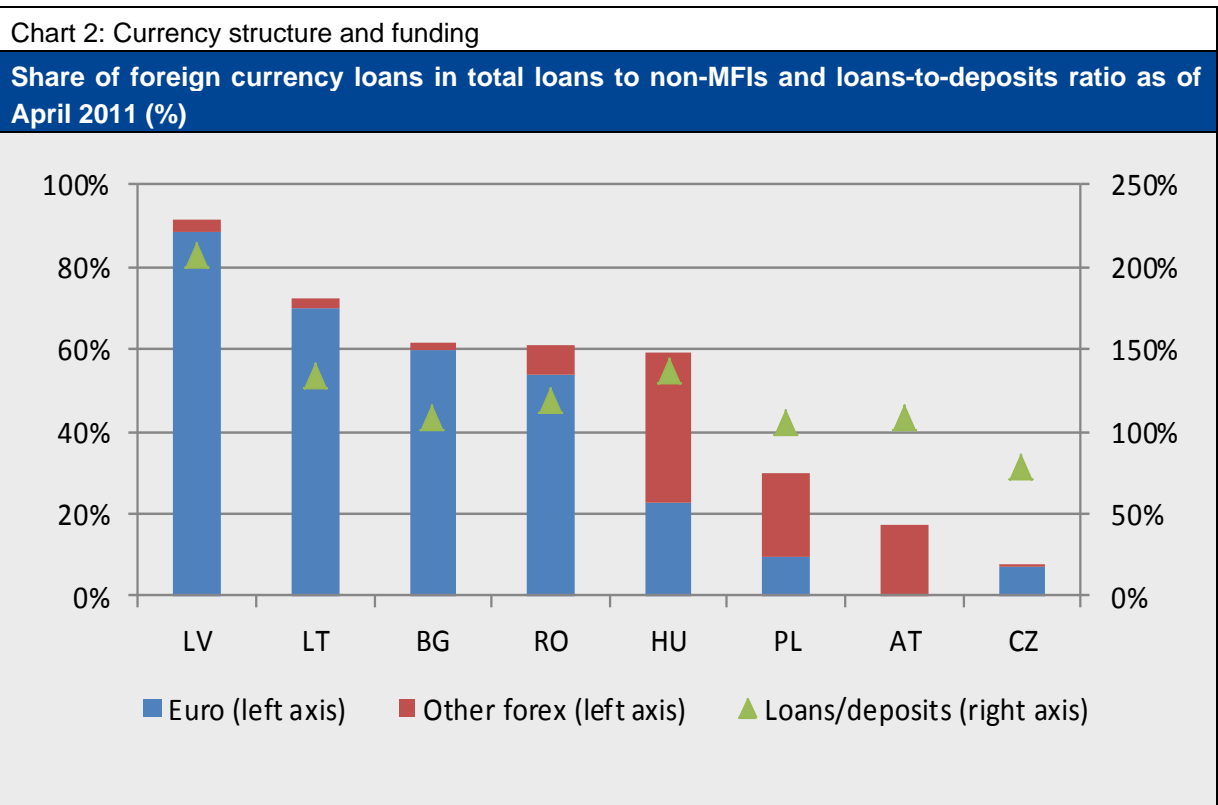
Source: Consolidated Banking Data, Statistical Data Warehouse, ECB.

Strong growth in CEECs during the pre-crisis period attracted large capital inflows, with bank-intermediated forex loans representing one of the important channels of these inflows. As capital in CEECs was scarce in the mid- to late 1990s and early 2000s, some capital inflow may have been warranted. However, in the early to mid-2000s the massive scale and, in some cases, undesirable structure of inflows (high share of bank lending in comparison to foreign direct investments) contributed significantly to the build-up of macro-financial vulnerabilities in a number of CEECs.

Capital inflows contributed to strong credit expansion. Foreign-owned banks were a natural vehicle for capital inflows as they could extend loans funded from home market sources, typically credit lines from parent institutions or wholesale markets. Flows through banks were channelled mostly into mortgages or consumer loans, pushing up consumption and property prices. As a result, excessive credit growth produced a self-reinforcing boom in real estate and the overall economy. In addition, unlike foreign direct investments, the capital inflows through banks were fostering investment in the sector of non-tradable goods and thus did not contribute to an increase in productive capital (from the point of view of the economy's ability to service foreign debt). On the other hand, the inflows still brought about an increase in external debt and a growing reliance on foreign financing. As a consequence, the growing indebtedness of the economies was not accompanied by a corresponding growth in potential output which would help to service and repay the underlying debt in the future.

There is strong evidence that forex lending accounted for a major part of capital inflows through the banking channel and produced high overall credit growth in the affected countries. In Austria, Bulgaria, Hungary, Latvia, Lithuania, Poland and Romania forex loans grew to represent a considerable share of

banking loan portfolios. The currency structure of forex loans differs across EU Member States. In some CEECs (Bulgaria, Latvia, Lithuania and Romania), forex loans have been extended predominantly in euros, which seems to be the natural choice given exchange rate regimes that are fixed to the euro (or, in the case of Romania, a managed floating rate). In some countries (Austria, Hungary and Poland), other currencies played a dominant role, mainly the Swiss franc (see Chart 2). The high share of forex loans also typically correlates with high loan-to-deposit ratios, which is not surprising given their role in capital inflows through the banking sector.



Source: Balance Sheet Items, Statistical Data Warehouse, ECB.

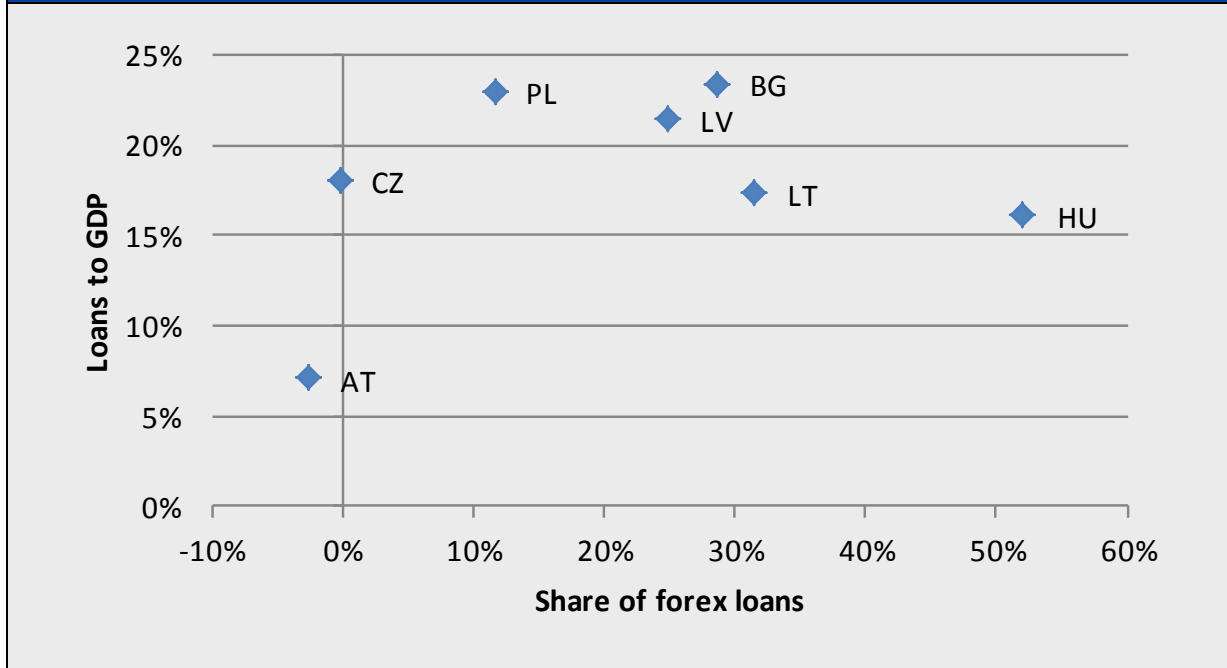
3 FOREX LOANS – RISKS TO FINANCIAL STABILITY AND MARKET FAILURES

Forex loans are associated with a variety of risks, starting with the increased probability of credit booms, elevated credit and funding risks, impediments to monetary policy and enhanced potential for cross-border spillovers.

The experience of CEECs shows that forex lending fuelled extensive credit growth (see Chart 3) and in some cases eventually translated into asset price bubbles.

Chart 3: Credit growth and forex lending

Share of forex loans and loans-to-GDP ratio in selected EU countries (loans to households, change between December 2004 and December 2011 in percentage points)



Source: Balance Sheet Items, ESA95, Statistical Data Warehouse, ECB

Banks extending forex loans also face a higher credit risk due to currency mismatches on the unhedged borrowers' balance sheets. This particularly concerns the household sector which usually receives most of its income in local currency. As a depreciation of the local currency results in a higher debt service burden for forex loans, disposable income of unhedged borrowers declines, together with their ability to service the debt. This creates an additional risk stemming from the non-linear relation between credit and market risk². Moreover, depreciation automatically increases the loan value in local currency, and higher loan-to-value ratios reduce the potential recovery ratios for banks.

An additional risk concerns funding and hedging. Due to an insufficient (or non-existent) forex deposit base, banks usually relied on wholesale markets or intragroup financing to hedge or fund their portfolio of foreign currency loans (although in some countries, such as Bulgaria and Latvia, a substantial forex deposit base exists). Their vulnerability to changes in the cost and availability of forex funding is further aggravated by the maturity mismatch between forex loans extended to bank clients, which are typically long term, and interbank transactions financing the loan portfolio or

² The separation into credit and market risk plays a significant role in applied risk management practices, as conventional approaches often proceed in a compartmentalised fashion, meaning that the risk types are often estimated separately and then simply added up. In the case of forex loans, credit and market risk are related in a non-linear way as they depend simultaneously on market and credit risk factors. This non-linear interaction causes the combined risk position of these two risks to be higher than the sum of its components ("compounding effects" – the opposite of diversification effects). Thus, conventional risk management approaches that calculate the total risk position as the sum of the separately estimated risk components lead to sizeable biases in overall risk estimates.



hedging the market risk related to it (e.g. forex swaps). Therefore, a significant deterioration of interbank market liquidity or of the financial situation of the parent entity may result in serious liquidity strains for subsidiaries engaged in foreign currency lending. In countries with floating exchange rates, a depreciation of the local currency increases the liquidity needs of banks which extend forex loans and hedge them using forex swaps. When banks roll over forex swaps after a depreciation, they need to use more local currency in the spot leg of the transaction, which can lead to liquidity strains. A similar mechanism exists for longer-term cross-currency interest rate swaps, where a depreciation increases the credit exposure of the counterparty, making it necessary for the bank which hedges its forex loan portfolio to provide additional collateral.

The dependence on parent entities for forex funding or hedging also illustrates possible spillover effects between distressed international banking groups and their local subsidiaries. The contagion may also spread in the opposite direction. Meeting additional funding or capital needs of subsidiaries, due to a materialisation of funding or credit risk accumulated in the forex loan portfolio, may also become a serious challenge for the parent banks. The market perception of parent banks may deteriorate if it is considered that the exposure of subsidiaries to forex lending affects the whole group, creating a challenge for home country authorities. The spillover effects are likely to be amplified in times of crisis or market turbulence, when institutions in different jurisdictions are subject to the same types of shocks. This is why, despite the fact that risks resulting from forex loans do not affect the entire European Union, they should be considered systemic as there is a close relationship between the subsidiaries granting forex credit and their parent companies.

Forex loans further represent a significant risk to monetary policy. A build-up of forex credit adversely affects the interest rate transmission channel, as domestic monetary policy cannot influence the cost of credit with respect to forex-denominated debt. An increase in domestic interest rates may have a limited impact on domestic demand, as economic agents replace local currency debt with forex debt. In countries with floating exchange rates, the appreciation of local currency as a result of a domestic rate rise may be a further impulse for forex debt accumulation, as economic agents tend to form backward-looking expectations with regard to exchange rate developments. The vulnerability of households' financial positions to changes in exchange rates is another factor causing the exchange rate channel of monetary policy to become more complex. For example, a depreciation of the local currency would not only improve the export competitiveness (thus raising total demand), but also decrease the part of disposable income of forex-indebted households that can be spent on consumption (thus lowering demand). This additional disruption to the monetary transmission mechanism was a significant challenge for some policy-makers in CEECs, making it much more difficult to steer their economies along sustainable economic growth paths.

The accumulation of numerous systemic risks in the economies of CEECs was not an example of mass irrationality. To a significant extent, the risks accumulated as a result of individually rational actions. For borrowers, taking out forex mortgage loans was to some extent justified as they offered a cash-flow advantage when compared to domestic currency loans. This advantage was at the expense of additional cash-flow volatility and the risk of falling into negative equity³, both connected

³ A mortgage borrower is said to be in negative equity when the current value of the loan principal to be repaid exceeds the market value of the property. This can be the result of a fall in property prices or, for a foreign currency loan only, a depreciation of the local currency which leads to an increase in the local currency value of the loan principal.

to exchange rate volatility in countries with floating exchange rates. On the other hand, the interest rate risk of forex loans could be considered lower than in the case of domestic currencies (as the natural interest rate – or interest rate consistent with long-term sustainable economic growth – was judged to be lower and less volatile for developed economies compared to developing ones). As forex loans were usually used to finance the housing needs of the borrower, negative equity was not by itself an incentive to default. However, a depreciation of domestic currencies did have adverse effects, such as decreasing the geographic mobility of the borrower in the labour market and increasing the negative effect of job losses on households. These risks were underestimated by borrowers and lenders alike in the pre-crisis phase, as currencies of CEECs with floating exchange rates appreciated and economic growth was strong.

A rapid expansion of the forex loan portfolio made it possible to attract new clients, making it easier for a bank to increase its market share and exploit cross-selling opportunities. In the short run at least, this strategy could have been very profitable, which in turn induced the banks to put more and more emphasis on this market segment and forced those banks which initially shied away from forex loans to join the competitive race. The well-known tendency to underestimate the risk of bust⁴, prevalent in the pre-crisis period in the financial systems of many countries, including highly developed ones, exacerbated this trend.

This combination of apparently rational individual decisions contributed to elevated risks and vulnerabilities in the banking systems and economies concerned. This is yet another illustration of market failures⁵ being an underlying cause of credit booms, which lead to the accumulation of systemic risk.

The systemic nature of risks related to forex lending is caused by two main factors. The first factor, which is more relevant for countries with floating exchange rates, is that forex lending introduces a common element – changes in the exchange rate – which influences the credit and liquidity risks of individual banks and makes them positively correlated. A depreciation of the local currency simultaneously increases the probability of borrowers who took out forex loans defaulting and increases loan-to-value ratios, thus lowering recovery rates and leading to higher liquidity needs for some banks with forex loan portfolios. This correlated shock has an impact on all banks engaged in forex lending. The second factor, which is of importance for all countries regardless of the exchange rate regime, is that the expansion of forex lending contributed to the fragility of banking systems through increased cross-border interconnectedness and the facilitation of credit and asset price booms.

The high profitability of forex lending in the boom phase made it hard for micro-prudential supervisors, both in the host and home countries, to challenge the banks. Given that, in most cases,

⁴ The role of disaster myopia – or the tendency of people to underestimate the probability of adverse events if similar adverse events occurred only in the distant past – in the build-up of risk prior to the crisis was highlighted by, among others, Andy Haldane in “*Why banks failed the stress test*” (speech available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2009/speech374.pdf>).

⁵ The term “market failure” is used to mean a situation where the outcomes of individual choices (based on each individual pursuing its self-interest) lead to an outcome which is not Pareto optimal (which means that there exists an outcome where no one is worse off and at least some economic agents are better off).

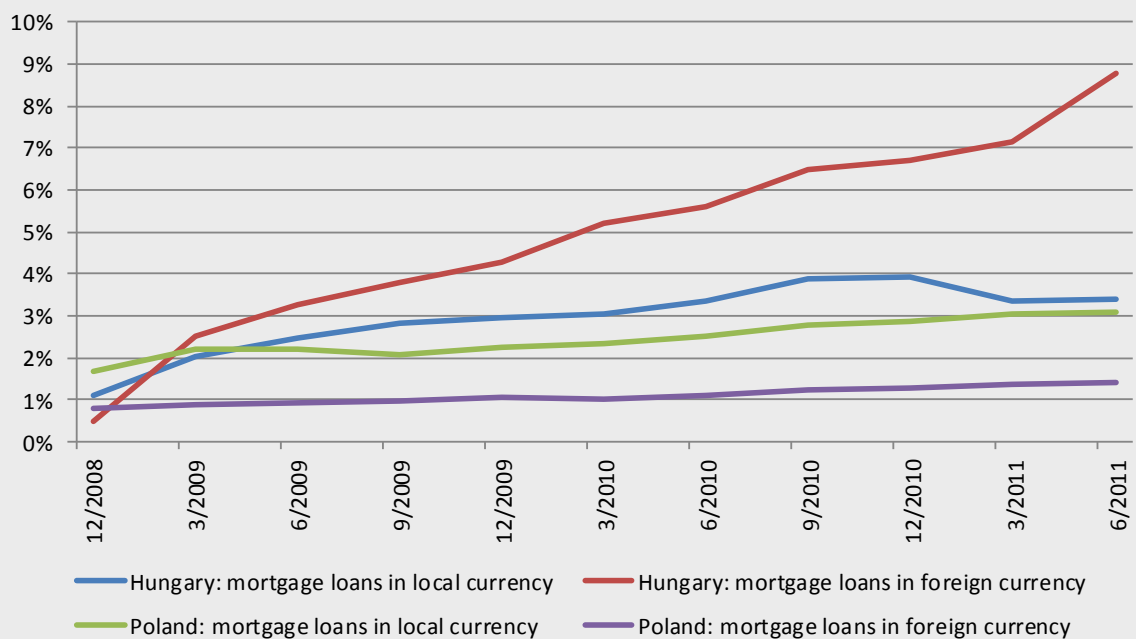
operations in CEECs only accounted for a minor share of the consolidated balance sheets of banks headquartered in highly developed countries, there was a tendency among group-level supervisors to view the risks as not significant from the point of view of the whole group. This contributed to making effective cross-border coordination of regulatory measures a difficult challenge.

The significance of the risks and the consequences of their potential materialisation may vary substantially across countries. This is, at least partially, a result of different approaches applied by supervisors and regulators (see below) and heterogenic market standards. The latter case is well illustrated by the role played by the structure of mortgage contracts in aggravating or alleviating the consequences of local currency depreciation in some of the CEECs.

For example, the Polish market practice was that banks linked the cost of mortgage loans directly to market interest rates (rates were determined as an interbank rate plus a fixed margin). Therefore, the negative effects of strong local currency depreciation at end of 2008 and beginning of 2009 were offset to a significant extent by a fall in market interest rates after rate cuts by the Swiss National Bank and the ECB. The positive impact of a fall in global interest rates on the cost of servicing foreign currency loans did not, however, affect Hungary. Due to a different credit pricing regime, Hungarian banks were allowed to unilaterally set the interest rates charged on loans without reference to market rates. As the fall in main global interest rates was not reflected in interest rates charged by Hungarian banks on forex loans, households suffered a substantial rise in the cost of instalments during the period of currency depreciation (see Chart 4).

Chart 4: Performance of forex mortgages in Hungary and Poland

“Non-performing loans” ratios for mortgage loans in Hungary and Poland



Note: For Hungary, “non-performing loan” was defined as a share of loans more than 90 days past due.

Source: Magyar Nemzeti Bank, National Bank of Poland.

The significance of risks related to forex lending depends, to a certain extent, on the exchange rate regime. The risks related to exchange rate volatility are less important for countries with currency boards or fixed exchange rates (for lending in the base currency) – as long as the exchange rate regime is sustainable. EU Member States from the CEE region which have pursued these regimes have so far been successful in keeping them intact. The risks related to credit and asset price booms, however, are of similar importance for all countries, regardless of the exchange rate regime; as long as the interest rate on foreign currency is significantly lower than the natural interest rate for a country, forex lending will be associated with a higher risk of unsustainable booms.

4 REGULATORY MEASURES USED BY INDIVIDUAL COUNTRIES

The mechanism of the forex credit boom was similar across CEECs, but the approach and tools used by national authorities differed. Countries with currency board arrangements with the euro as the base currency, or currencies pegged to the euro, concentrated on curbing the overall credit growth (Bulgaria) or addressed the issue of forex loan growth by imposing limits or additional capital requirements on banks' open forex positions (Latvia 1995, Lithuania 2007).

Some countries directly targeted the build-up of forex loan portfolios by increasing capital requirements (Romania 2004 and 2010, Hungary 2008, Poland 2008 and 2012, Latvia 2009), adjusting the loan-to-value ratios (Latvia 2007, Hungary 2010, Lithuania 2011, Romania 2011), adjusting the debt-to-income ratios (Romania 2008 and 2011, Hungary 2010, Poland 2010 and 2012, Lithuania 2011), restricting the stock of forex loans to a certain threshold of own funds (Romania 2005), or tighter verification of borrowers' income and the first down payment on credit for a real estate purchase amounting to at least 10% of the transaction value (Latvia 2007). In some cases, the authorities resorted to extreme measures such as a temporary outright ban on new forex loans (Hungary 2010). Another tool used was moral suasion, where banks were persuaded to offer such financing only to hedged or the most affluent clients (Latvia 2010, Hungary 2011).

In Latvia (2007), additional measures aimed at dampening real estate market dynamics were adopted (introduction of capital gains tax on real estate transactions, introduction and increase in residential property tax, increased and differentiated stamp duty for registration of real estate depending on the number of properties already held by an individual, differentiated (depending on the number) stamp duty of mortgage collateral registration).

Austrian authorities introduced minimum standards on foreign currency lending for the Austrian market (2003 and 2010). In 2010, they also issued guiding principles on foreign currency lending in CEECs (targeted at subsidiaries of Austrian banks) aiming to curb the flow of forex lending in currencies other than the euro⁶. These measures were introduced only after the peak of the boom in forex lending (which in most CEECs happened around 2006-2008).

⁶ The guidelines applied also to subsidiaries of Austrian banks operating in countries of the Commonwealth of Independent States, where the guidelines highlighted lending in other currencies than the US dollar.

Nevertheless, the effectiveness of nearly all measures taken in CEECs to mitigate forex lending can generally be considered limited, at least until 2010/2011 (the increase in risk aversion of banks during the crisis helped supervisors to reduce the scale of forex lending). The large-scale economic integration of banks and markets enabled regulatory arbitrage, which was a major obstacle to efficient reaction by host authorities in the pre-crisis period. Thus, when measures were aggressive enough to strongly impact forex lending, they failed or even became counterproductive.

The example of Romania clearly shows how regulations aimed at limiting forex loans were circumvented. The restriction on the value of forex loans in relation to banks' own funds was circumvented by banks originating forex loans and then selling the loan portfolios to non-residents, including parent companies. This blurred the scale of forex lending and made any risk assessment even more difficult.

In some cases, however, the measures at least helped to contain some of the underlying risks, mainly credit risk. For example, in Poland, the so called Recommendation S, adopted by the banking supervisor in 2006 and amended in 2011, imposed tight lending standards on forex loans by setting a lower ceiling for the debt-service burden and for the maturity used for the calculation of clients' creditworthiness. This regulation contributed significantly to improving the quality of forex loans, but was not able to limit the pace of forex lending. Similar measures were adopted by Romania in 2008 and 2011.

An important lesson to be learned is that effective measures require (at least in most cases) reciprocity from home authorities. The EU-wide enforcement of the restrictions on forex lending to borrowers from a particular jurisdiction is therefore necessary, in order to make regulatory arbitrage less efficient and more costly. While an efficient risk-oriented supervisory process (taking into account risks both at home and host level) would lessen the need for mandatory reciprocity, the history of regulatory arbitrage, especially in the pre-crisis period, indicated the need for a reciprocity arrangement.

5 RESPONSE OF THE ESRB AND MAIN LESSONS FROM FOREX LENDING

The ESRB decided to tackle the problem of forex lending through Recommendation 2011/1 issued in September 2011. The recommendation is based on three principles: enhancing borrowers' awareness of the risks inherent in forex loans, improving banks' risk management and capital buffers, and ensuring cooperation among Member States with the aim of preventing regulatory arbitrage. The recommendation recognizes that lending in all currencies other than the legal tender of the country in question gives rise to risks which should be addressed, even more so when the loans are taken out by borrowers without a natural (e.g. export receipts) or financial hedge (e.g. derivative instruments).

The recommendations are addressed to national supervisory authorities (with specific roles also being given to EU Member States and the European Banking Authority), who will require financial institutions to provide borrowers with sufficient information to make well-informed and prudent decisions regarding the risks involved in foreign currency lending. Moreover, the supervisors should ensure that credit institutions properly incorporate foreign currency lending risks into their internal risk management systems, which in turn is expected to contribute to improved risk pricing. One of

the problems in forex lending risk assessment by banks was the insufficient attention being given to exchange rates as risk drivers for forex lending. That is why banks should consider the potential adverse effects of exchange rate volatility on the creditworthiness of a borrower. It is also recommended that national supervisors require financial institutions to hold adequate capital and liquidity buffers to cover risks associated with forex lending. Finally, the recommendation on reciprocity constitutes a crucial feature of this framework. If a Member State introduces a tightening of regulatory policy regarding forex loans, home authorities of financial institutions operating through the provision of cross-border services or through branches should impose measures on foreign currency lending to the residents of the host Member State in question which are at least as stringent as those introduced by the host authorities⁷. This ensures proper coordination of supervisory measures, which is a key component of making them efficient.

The experience with forex loans shows that addressing systemic risks to financial stability in the EU requires early identification, international cooperation and decisive action by local supervisors. This is a strong argument in favour of incorporating a proper scope for local supervisory and macro-prudential powers in the regulatory package of the new capital framework for banks proposed by the European Commission. Designated national authorities, on their own initiative or in response to ESRB recommendations, should be able to pre-emptively tighten prudential capital requirements above EU-level minimums, when national systemic risks are detected. The scope for potential tightening should be broad and general given the unpredictability of future risks. The requirement to recognise and reciprocate measures between Member States would be crucial for the effectiveness of the measures. Given the complex and ever-changing nature of systemic risks, as well as the speed and unpredictability with which systemic risks can spread, the flexibility of macro-prudential policy-makers to take remedial actions, adapted to country-specific characteristics, is of particular importance. However, the ESRB Recommendation 2011/1 refrains from setting detailed rules in all areas related to forex lending, to avoid overburdening the financial institutions and authorities in countries where the risk is not currently present. The Recommendation can, however, be seen as a proposed framework to be used by those authorities if risks appear in the future.

At the same time, efficient implementation of macro-prudential policies requires the exchange of information on planned measures and coordination between authorities in the European Union in order to assess the potential cross-border spillover of systemic risk and to prevent regulatory arbitrage. The ESRB, as an institution which brings together all EU central banks and national supervisory authorities, the European Commission, the three European Supervisory Authorities and other relevant institutions, is well-suited to carry out effective coordination and serve as a broad forum for discussion of issues crucial to financial stability in the EU.

⁷ In practice, the recommendation on reciprocity suggests that, if a certain macro-prudential measure is implemented in EU country A to address risks stemming from foreign currency lending, then all other EU national authorities would require institutions under their supervision to abide by that measure when lending in foreign currency to clients in country A, and also when lending through branches or as a cross-border activity. This does not, however, impinge on the capacity of the home supervisor in its consolidated supervision.