

## E ADDRESSING RISKS ASSOCIATED WITH FOREIGN CURRENCY LENDING IN EU MEMBER STATES

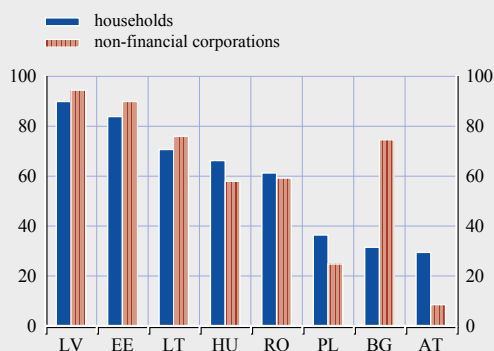
*As the impact of the recent financial crisis began to spread beyond mature economy financial systems, attention was increasingly drawn to the potential systemic risks associated with the prevalence of foreign currency lending in some EU Member States. Although the direct exchange rate risk for banks in most of these countries is controlled by regulatory limits on open foreign exchange positions, banks are still exposed to the indirect exchange rate risk that can arise from currency mismatches on their clients' balance sheets. This special feature summarises the measures that have been taken by several EU countries to address the financial stability risks related to rapidly expanding foreign currency lending to the non-financial private sector. The experience gained so far indicates that the effectiveness of these measures has been rather limited. Although a variety of factors appear to explain this, what has been particularly important is the persistence of wide differentials in the interest rates paid on loans in domestic currency over those paid in foreign currency, as well as the intensity of bank competition. Moreover, countries' experiences have revealed that when the presence of foreign-owned banks in local markets is significant, as is the case in non-euro area EU countries in central and eastern Europe, the impact of implementing these measures has been materially curtailed.*

### INTRODUCTION

Lending in foreign currencies to the non-financial private sector is not an entirely new phenomenon in the EU, but in most countries such activities account for only a fraction of total lending by banks. There are nevertheless several EU countries in which lending in foreign currencies has led to the build-up of substantial currency mismatches on private sector balance sheets. Although the countries where this has occurred are mainly non-euro area EU Member States in the central and eastern Europe (CEE) region<sup>1</sup>, the issue is also

**Chart E.1 Loans in foreign currency to the domestic non-financial private sector in selected EU countries**

(Q4 2009; percentage of total loans)



Source: ECB.

Note: Countries with a share of foreign currency loans in total loans to domestic households that exceeds a threshold of 15% are shown.

relevant in the case of Austria (see Chart E.1). Borrowers in some of these countries have accumulated high debt volumes denominated in foreign currencies, particularly in euro, but also in Swiss francs and Japanese yen.<sup>2</sup>

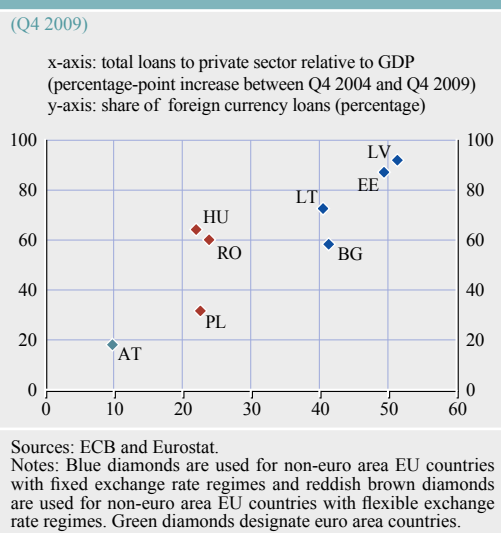
There seems to be a strong link between rapid credit growth and borrowing in foreign currencies in non-euro area EU countries of the CEE region. Countries which had experienced particularly strong credit growth before the global financial crisis also tended to have a higher share of foreign currency loans (see Chart E.2).

With the spreading of the global financial crisis from financial systems in mature economies, some of the non-euro area EU countries in the CEE region faced a depreciation of their currency. This contributed to raising debt servicing costs for domestic borrowers, although the low interest rates on loans in foreign currencies to some extent mitigated the short-term consequences of currency

1 As defined here, the non-euro area EU Member States of the CEE region are Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Romania.

2 Euro-denominated loans are dominant in the Baltic states, Bulgaria and Romania, while Swiss franc-denominated loans are popular in Austria, Hungary and Poland.

**Chart E.2 Credit growth and foreign currency lending in selected EU countries**



depreciation. Nevertheless, if foreign currency interest rates were to rise unexpectedly, this would most likely threaten the performance of loans denominated in foreign currency.<sup>3</sup>

This special feature lists some of the driving factors behind foreign currency lending in EU countries and provides a brief overview of the financial stability risks associated with these activities. It also explains some of the measures that authorities in these countries have implemented in attempts to address the associated risks. In order to understand how these risks could be addressed in a better way, an evaluation is also provided of the effectiveness and the limitations of the measures taken and, based thereon, conclusions are drawn on how to tackle the issue of mitigating the risks associated with foreign currency lending to unhedged borrowers.

#### FACTORS EXPLAINING FOREIGN CURRENCY LENDING IN EU COUNTRIES

Several factors have contributed to the prevalence of foreign currency lending in non-euro area EU countries in the CEE region. On the supply side, insufficient domestic savings in some of these countries and a high

presence of foreign-owned banks in all non-euro area EU countries in the CEE region are important factors in explaining the strength of foreign currency lending there. On the demand side, high differentials between the interest rates paid on loans in domestic and foreign currency, as well as exchange rate-related factors (such as a low exchange rate volatility, expectations of a further appreciation of the domestic currency and expectations of a future adoption of the euro, especially in those countries with fixed exchange rate regimes) contributed to the rapid expansion of foreign currency lending (see Chart E.3). As the demand for credit went beyond domestically available resources, banks attracted capital from abroad, benefiting primarily from the financial linkages with their parent banks residing in the rest of the EU. Countries with lower domestic savings tend to have higher shares of foreign currency loans.

The empirical literature supports the view that factors such as the degree of domestic deposit euroisation, banks' desire for currency-matched portfolios and the large interest rate differentials between domestic and foreign currency loans remained behind foreign currency lending in non-euro area EU countries in the CEE region.<sup>4</sup> The high prevalence of foreign currency lending in countries with tightly pegged exchange rates or currency board arrangements suggests that the degree of exchange rate flexibility also played a role. However, according to the literature, the direct link between the exchange rate regime and foreign currency lending appears relatively weak for emerging market economies.<sup>5</sup>

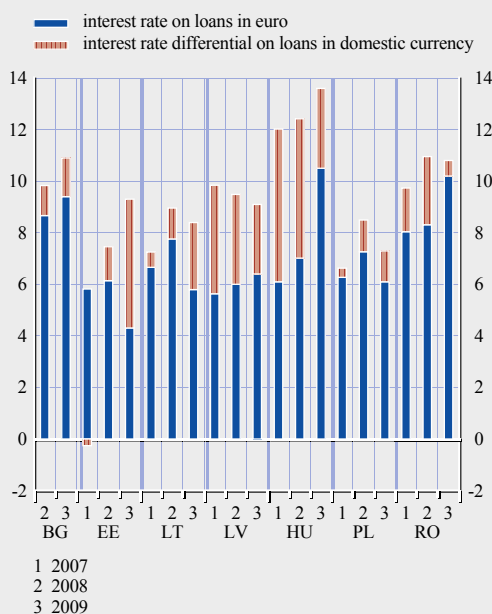
3 Although the share of foreign currency loans in total domestic lending virtually stopped growing in countries with floating exchange rate regimes in the course of 2009, it is difficult to distinguish the extent to which this reflected a greater risk awareness among both lenders and borrowers as a consequence of the impact that lower economic activity had on the overall decrease in new lending activity.

4 See A. Luca and I. Petrova, "What drives credit dollarization in transition economies?" *Journal of Banking and Finance*, Vol. 32, 2008, pp. 858-869; and Ch. Rosenberg and M. Tirpák, "Determinants of foreign currency borrowing in the new Member States of the EU", *Czech Journal of Economics and Finance*, Vol. 59, Issue 3, pp. 216-228.

5 See A. Honig, "Dollarization, exchange rate regimes and government quality", *Journal of International Money and Finance*, Vol. 28, 2009, pp. 198-214.

**Chart E.3 Interest rate differential on loans for house purchase in selected non-euro area EU countries**

(2007-2009; percentage points)



Source: ECB.

Note: Average level weighted by volumes of new loans.

This may, in part, reflect the fact that foreign currency lending in some of the countries with fixed exchange rates has increased only in recent years, while other factors, such as increasing interest rate differentials, may have played a more important role in explaining the variation over time. The exchange rate regime may nonetheless be an important factor explaining the degree of foreign currency lending in non-euro area EU countries in the CEE region: overheating and high inflation rates in countries with fixed exchange rates are likely to have contributed to the divergence of nominal interest rates, thereby increasing the attractiveness of the low interest rates on foreign currency loans. In addition, the plans for the adoption of the euro that have been announced by the authorities in these countries, and their strong commitment towards keeping to the central parity rate, increased incentives for borrowing in euro.

Moreover, there can be other economic reasons, such as natural hedging (e.g. export receipts or

remittance inflows to households denominated in foreign currency), which could motivate borrowing in foreign currencies. However, the extent to which natural hedging might cover sizeable currency mismatches non-euro area EU countries in the CEE region generally appears rather small, in particular for households.

In the case of Austria, the strength of foreign currency lending can be explained more or less entirely by demand factors, especially the low interest rates on loans extended in Swiss francs and Japanese yen.

#### FINANCIAL STABILITY RISKS ASSOCIATED WITH FOREIGN CURRENCY LENDING

There are several ways in which foreign currency borrowing can create risks for financial stability. When domestic borrowers have unhedged foreign currency debt, a significant depreciation of the local currency would translate into an increase in the local-currency value of outstanding debt. As a consequence, this would lead to a deterioration of the debt-servicing capacity of unhedged domestic borrowers. Since a large fraction of the private sector would be adversely affected at the same time, such an event could have the potential, if the exchange rate shock was sufficiently large, to pose a systemic financial stability risk for the country concerned. Moreover, if the foreign currency appreciation were to take place together with a rise in the interest rates on foreign currency loans, this would clearly aggravate the borrower default risk.<sup>6</sup> An increase in borrower defaults would transform into an increase in

<sup>6</sup> The particular riskiness of foreign currency lending originates in a non-linear relationship between default and exchange rate risk, which is easily neglected in standard risk management approaches that treat credit and market risks separately. The building blocks of this malign riskiness of foreign currency loans and its empirical relevance was demonstrated in a recent study led by the Oesterreichische Nationalbank and conducted in the context of a working group of the Basel Committee Research Task Force. See Basel Committee on Banking Supervision, "Findings on the interaction of market and credit risk", *Working Paper Series*, No. 16, Bank for International Settlements, May 2009; and P. Hartmann, "Interaction of market and credit risk", *Journal of Banking and Finance*, No 34(4), 2010, pp. 697-702.

provisions and write-offs and could pose a significant decrease in banks' capital levels. The low prevailing level of interest rates on loans in foreign currencies has to some extent mitigated the short-term consequences of currency depreciation in the non-euro area EU countries with floating exchange rate regimes; however, a future rise in foreign currency interest rates and a depreciation of domestic currencies, if this was to recur, would threaten the performance of loans denominated in foreign currency via higher monthly payments. As the largest part of foreign currency loans to households are long-term housing loans secured by collateral in the form of residential property, this fact could have created a perception that these loans are free of risk. However, activity in housing markets tends to move in line with overall economic activity, and it might be difficult for banks to realise collateral in periods of an overall slowdown in economic activity.

In addition to credit risk, a significant deterioration of the quality of foreign currency loan portfolios can expose banks to earnings risk, through a significant decrease in interest income (as loan portfolios represent the major part of banks' assets in non-euro area EU countries in the CEE region) and an increase in provisioning.

Another source of risk for financial stability can arise from the fact that a significant deterioration in the quality of foreign currency loan portfolios can also create funding risk for banks, as the inflows of funds that are available to banks for repayment of their own liabilities could decrease significantly (as a result of a rise in loan arrears). This would result in higher rollover needs with respect to existing funding over the duration of the loan portfolio. In addition, if liquidity in foreign currency swap markets decreases significantly and banks have no access to central banks' lending facilities in foreign currency, funding risk of foreign currency loans can materialise in the short term.

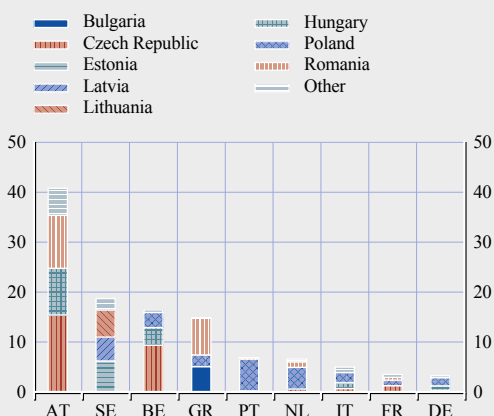
Finally, there are also macroeconomic implications that stem from the high exposure of private non-financial sector balance sheets to

foreign exchange fluctuations. An appreciation of the domestic currency will have a positive effect on the net wealth of borrowers in foreign currency, and this can raise demand for new foreign currency loans, especially if there is a persistently wide interest rate differential on loans in domestic currency over those in foreign currency. This, in turn, can facilitate aggregate demand and raise the risk of an overheating of the economy. Similarly, a depreciation of the domestic currency will lead to an increase in the value of foreign currency debts in domestic currency terms. This, in turn, will lead to wealth destruction and a decrease in households' capacity to spend and save. Hence, a high exposure of household sector balance sheets to foreign exchange fluctuations may also create the risk of excessive credit growth during booms and, subsequently, larger credit squeezes during bust periods, thereby aggravating boom-bust cycles.

In addition to the above-mentioned risks to the countries concerned, high shares of foreign currency lending in non-euro area EU Member States in the CEE region and other countries outside the EU can create credit risk for large EU and, especially, euro area banks that are active in these countries. A number of large EU banking groups have significant exposures to the non-euro area EU countries in the CEE region through their consolidated asset holdings (including direct cross-border lending and lending by subsidiaries and branches of these banks in non-euro area EU countries in the CEE region). Countries, whose banking groups are particularly active in lending to borrowers resident in non-euro area EU countries in the CEE region are Austria, Belgium, France, Germany, Greece, Italy, the Netherlands and Sweden (see Chart E.4). However, it should be mentioned that the exposures shown in the aforementioned chart combine domestic and foreign currency lending, and should thus not be interpreted in a straightforward manner as a measure of foreign currency risk. In the case of the Czech Republic, in particular, lending in domestic currency by foreign-owned banks' subsidiaries dominates lending in foreign

**Chart E.4 Consolidated lending exposures of selected EU banking systems to selected non-euro area EU countries**

(2009; percentage of GDP, per lending country)



Sources: BIS and Eurostat.

Notes: BIS statistics on consolidated foreign claims of domestically owned banks in lending countries on individual non-euro area EU countries on an immediate borrower basis. The largest three exposures to each particular country are shown in the chart, while smaller exposures are combined under other countries.

currency. To the extent that the lending exposures of large EU banking groups to non-euro area EU countries in the CEE region are denominated in foreign currency and that the associated risks are not normally hedged by borrowers in these countries, this can translate into greater credit risks for these banking groups.

#### EFFECTIVENESS OF THE MEASURES THAT HAVE BEEN TAKEN BY AUTHORITIES<sup>7</sup>

In addressing risks related to foreign currency lending, some countries, especially non-euro area EU countries that have floating exchange rate regimes in place, took a variety of measures aimed at increasing the costs for banks of extending loans in foreign currency during the period of rapid lending expansion from 2004 to 2007. These include the activation of monetary policy instruments, prudential tools and administrative measures.

These measures can be divided in three groups, according to the target they were expected to address. The first group includes higher reserve requirements on bank liabilities in

foreign currency and regulatory measures such as higher risk weights and higher provisioning rates on loans in foreign currency. The measures were designed mainly to create additional “implicit costs” for banks related to the holding of foreign currency liabilities and assets on their balance sheets, aiming at decreasing the supply of loans. However, in addition to the impact on the supply side, the measures have the potential to address the demand side if they lead to an appropriate pass-through of costs to a higher interest rate on new foreign currency loans in order to compensate for higher opportunity costs or additional capital charges. Second, restrictions on loan-to-value ratios explicitly set the maximum amount for each individual new loan, while at the same time controlling risk-taking by banks. And third, restrictions on payment-to-income ratios and other eligibility criteria for borrowers are pure demand-side measures intended to curtail the demand for new loans in foreign currency.

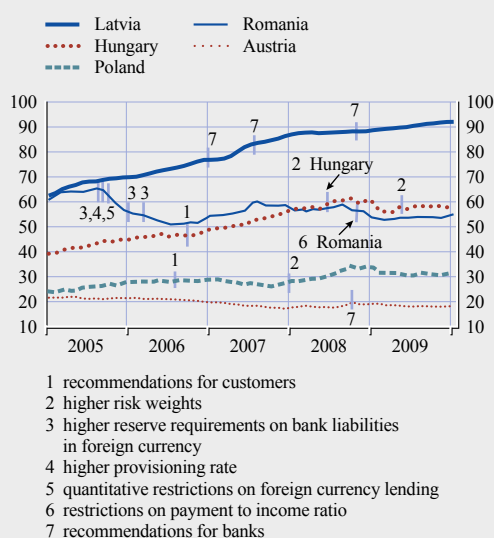
The effectiveness of the measures taken to discourage foreign currency lending in the period from 2005 to 2007 has proven to be rather limited (see Chart E.5).

The limited impact of these measures could be explained by a number of factors: (i) persistently wide differentials between interest rates on loans in domestic currency and those on loans in foreign currency resulted in continuously strong demand for foreign currency loans; (ii) a shortage of domestic (local currency) savings and intense bank competition underpinned the supply of foreign currency loans; and (iii) a significant presence of foreign-owned banks in the non-euro area EU countries in the CEE region provided opportunities for banks to circumvent such measures by partially shifting the foreign currency loans to the balance sheets of parent banks or to affiliated non-bank financial

<sup>7</sup> This section draws mainly upon the information collated in the survey conducted via the Banking Supervision Committee (BSC) and on the subsequent assessments provided by the national central banks concerning the effectiveness of these measures.

**Chart E.5 Shares of foreign currency lending in selected EU countries in which related measures were introduced**

(Jan. 2005 – Jan. 2010; percentage of total lending)



Sources: ECB, BSC survey (Nov. 2009) and information collected from national central banks (Feb. 2010).  
Note: Shares adjusted for foreign exchange rate effects.

intermediaries, which were outside the scope of responsibility of national authorities. In some countries, such measures were implemented only recently and their implementation coincided with the beginning of the slowdown in economic activity, or came shortly before the impact of the recent crisis had spread across non-euro area EU countries in the CEE region. The stabilisation of the share of foreign currency loans during the crisis may reflect supply-side factors resulting from a decrease in cross-border lending by parent banks. Therefore, it may be premature to make a robust assessment of their effectiveness.

The exception to this rule is to be found in Romania where a differentiation between minimum reserve requirements on bank liabilities in domestic and those in foreign currency (although taken in combination with other measures) seems, to some extent, to have helped in limiting the potential for lending in foreign currencies in the short term (see Chart E.5). In the long term, however, the constraining effect of the measure was weakened by the factors explained above.

Some countries with floating exchange rate regimes have issued recommendations to banks or their customers, addressing risks related to foreign currency loans and providing guidelines for borrower risk assessment. It seems that recommendations issued by the authorities in some countries have helped, to some extent, to raise the risk awareness of borrowers; however, their impact was offset by the further increase in interest rate differentials.

Recently, authorities in some countries (e.g. Austria and Hungary) have approved more strict minimum standards that require banks to assess the creditworthiness of unhedged borrowers more strictly or impose explicit restrictions on loan-to-value and payment-to-income ratios.

A number of countries, in particular those with fixed exchange rate regimes, have sought to address the rapid growth of overall domestic lending, which was – in the case of these countries – mostly in euro, rather than focusing only on lending in foreign currency. In these cases, the scope of the previously described instruments was extended to also cover lending in domestic currency (see Table E.1).

One way of assessing the effectiveness of the measures that were introduced in the countries concerned in order to address rapid overall lending growth is a comparison of the percentage changes in average year-on-year lending growth rates after the introduction of the measure to the same indicator before the measure was introduced (for example, a 20% decrease in the average year-on-year lending growth rate means a reduction in annual lending growth by one-fifth in the course of the year after the introduction of the measure). To control for an adverse impact of the slowdown in global economic activity, the percentage changes calculated are compared with the same indicator for the euro area.<sup>8</sup>

<sup>8</sup> Another option for controlling for the impact of the slowdown in domestic economic activity is to compare a country's credit growth rate with the growth rate of its GDP or the growth rate of the credit-to-GDP ratio, with negative growth indicating a slowdown of lending growth.

If the indicator calculated for a particular country is lower than that for the euro area, it could indicate that the measure was effective, at least, to some extent. On comparison across categories, regulatory and administrative measures seem to be more effective in addressing rapid lending growth than monetary policy tools. Again, caution is warranted when assessing the effectiveness of these measures, since – in many cases – their implementation coincided with the slowdown in economic activity and the start of recent crisis.

#### CONCLUDING REMARKS

The recent financial crisis underlined the potential systemic risks associated with the prevalence of foreign currency lending in some EU Member States and highlighted the need to address the issue in order to prevent a further increase in the stock of foreign currency loans. As a general principle, an overall operating environment for economic agents that encourages prudent and well-informed decision-making by lenders and borrowers is key to the prevention of growing currency mismatches on the private sector balance sheets. This involves the pursuit of sound and stability-oriented macroeconomic policies. In addition, the adoption of regulatory and supervisory policy measures can also play an important role in mitigating the risks stemming from foreign currency lending.

A certain combination of prudential and administrative measures (such as restrictions on loan-to-value ratios of mortgage-backed loans, a mandatory minimum down-payment and the requirement of a proof of a borrower's legal income), even if designed at the national level only, seem to have the potential to slow down overall mortgage lending, if introduced in a timely manner. The combination of restrictions

on the loan-to-value ratio and the requirement of an obligatory minimum down-payment as a percentage of the value of the property bought seems to limit the opportunities available to both banks and their clients to circumvent the measures (since both measures include the same property value).

The experiences of non-euro area EU countries' in the CEE region has shown that, given the significant presence of foreign-owned banks in these countries, addressing the issue of foreign currency lending and excessive credit growth, particularly from the supply-side, at the national level has had a very limited impact only, or no impact at all. This leads to the conclusion that broadly coordinated action involving home country supervisors is needed to address the issue both at the subsidiary and at the consolidated level. That would ensure that the effectiveness of the implemented measures is not curtailed by shifting parts of the loan portfolios to the balance sheets of parent institutions or non-bank subsidiaries, which are outside of the scope of national policy-makers' responsibility.

However, it should be borne in mind that most of the non-euro area EU Member States in the CEE region are in a catching-up phase and have insufficient domestic funding resources. For these countries, strong inflows of foreign capital are a normal phenomenon and foreign currency lending is indeed an important source of financing for real investments. Therefore, it is particularly important to find an optimal balance between the risks associated with foreign currency lending and the desired economic growth, and – subsequently – to develop policies to eventually replace foreign currency loans with the domestic currency lending, while at the same time avoiding a credit crunch.

**Table E.1 Measures taken to slow down overall domestic lending growth in non-euro area EU countries with a high proportion of foreign currency loans**

	Countries with fixed/pegged exchange rate							
	Bulgaria	Loan growth change (%)	Estonia	Loan growth change (%)	Lithuania	Loan growth change (%)	Latvia	Loan growth change (%)
<b>Monetary policy tools:</b>								
Interest rate increase							III & XI 2004; VII & XI 2006 <sup>1)</sup> ; III & V 2007 <sup>1)</sup>	-20(1)
Reserve requirements	2004; 2005; VII 2007 <sup>1)</sup>	114(-3)	X 2006	0(1.7)	V 2002	n.a.	VII 2004; I 2005; XII 2005 <sup>1)</sup> ; V 2006 <sup>1)</sup>	23(20)
<b>Regulatory measures:</b>								
Higher risk weights	X	n.a.	III 2006	4(19)	II 2007	-33(-1)	I 2008	-61(-16)
Restrictions on LTV	IV 2006	-36(17)					VII 2007	-41(-3)
Provisioning rate	XI 2005	n.a.					I 2008	-61(-16)
Tighter regulation on higher risk/large exposures	IV 2006	-36(17)						
Quantitative restrictions on lending growth	IV 2005 - XII 2006	n.a.						
Limits on inclusion of bank profits into capital	IV 2005	n.a.			I 2008	-25(-16)		
<b>Administrative measures:</b>								
Eligibility criteria for borrowers	X	n.a.						
Restrictions on payment-to-income ratio	X	n.a.						
Introduction of first down-payment							VII 2007	-41(-3)
Submission of income statement from State Revenue Service							VII 2008	-76(-50)
Tighter rules on taxes related to real estate transactions and government-subsidised mortgage conditions			2003; 2004	n.a.	X 2006	-27(2)	IV 2006	15(17)
Guidelines/recommendations for banks or customers	II 2006	see above	2003; 2004	n.a.	X	n.a.	I & VII 2007	-28(-2)

Sources: BSC survey (Nov. 2009) and information collected from national central banks (Feb. 2010).

Notes: The dates in the boxes denote the time of the implementation of the measures. X denotes that the measure was implemented, but the precise timing was not indicated.

1) Denotes the timing of the measures to which the assessment is provided on the right-hand side of each column. The change in lending growth is defined as a percentage change in the average year-on-year lending growth rates after the introduction of the measure when compared with the same indicator before the measure was introduced. The number in brackets denotes the change in lending growth in the euro area.



**Table E.1 Measures taken to slow down overall domestic lending growth in non-euro area EU countries with a high proportion of foreign currency loans (continued)**

	Countries with floating exchange rate					
	Hungary	Loan growth change (%)	Poland	Loan growth change (%)	Romania	Loan growth change (%)
<b>Monetary policy tools:</b>						
Interest rate increase					2004-2008	n.a.
Reserve requirements					VI 2006	8(7)
<b>Regulatory measures:</b>						
Higher risk weights	V 2008 <sup>1)</sup>	-27(-38)	I 2005;	n.a.	I 2007	3(-1)
Restrictions on LTV	V 2009	n.a.			II 2004	n.a.
Provisioning rate						
Tighter regulation on higher risk/large exposures						
Quantitative restrictions on lending growth						
Limits on inclusion of bank profits into capital						
<b>Administrative measures:</b>						
Eligibility criteria for borrowers	VI 2011	n.a.				
Restrictions on payment-to-income ratio					II 2004; VIII 2005	n.a.
Introduction of first down-payment						
Submission of income statement from State Revenue Service					VIII 2008	-72(-56)
Tighter rules on taxes related to real estate transactions and government-subsidised mortgage conditions	2003; 2009	n.a.				
Guidelines/recommendations for banks or customers						

Sources: BSC survey (Nov. 2009) and information collected from national central banks (Feb. 2010).

Notes: The dates in the boxes denote the time of the implementation of the measures. X denotes that the measure was implemented, but the precise timing was not indicated.

1) Denotes the timing of the measures to which the assessment is provided on the right-hand side of each column. The change in lending growth is defined as a percentage change in the average year-on-year lending growth rates after the introduction of the measure when compared with the same indicator before the measure was introduced. The number in brackets denotes the change in lending growth in the euro area.