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The Relationship between Monetary Policy and Financial Stability in the Context of the Recent Global Crisis

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Abstract: In recent years, pre-crisis years, the loans granted to household experienced an extremely accelerated dynamic in most new EU member states. Such a development has led to an increase in the degree of bank indebtedness of the households and to considerable macroeconomic and financial imbalances. The current crisis has stopped the rapid growth of the loans granted to households and has led to worsening financial situation of households and a significant deterioration of the soundness bank indicators. In this context, the purpose of our paper is a comparative analysis of the main characteristics of the evolution of bank loans granted to household in the new EU member states (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Romania), of the vulnerabilities caused by the fast increase of the bank indebtedness of the households, and the implications of the current crisis..

Keywords: Credit growth; New EU member countries; loans to households; vulnerabilities; global economic crisis

1 Introduction

Before the beginning of the current global crisis, most of the new EU member states that we included in our research (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania) have registered a rapid growth of the bank loans, especially of those granted to households. Such evolution was generally considered a progress in terms of making up for the structural and convergence gaps; however, on the other hand, this led to the occurrence of considerable macroeconomic and financial vulnerabilities.

The current global economic crisis had an extremely negative impact on households in most of the new EU member states. One of the main channels by which the current crisis worsened the economic and financial status of numerous households is that of the financial markets, due to the limited access to bank loans and to assets value decrease, especially real estate assets.

Our paper it is structured in five parts: the first part includes introductory remarks on the importance and relevance of the approached topic; the second part it is dedicated to the literature review; the third part highlights the characteristics of the financial intermediation process in the new EU member states considered by our research, especially from the point of view of loans granted to households; the fourth part of the paper reflects the effects of the rapid growth of the loans granted to households, whereas the fifth part emphasizes the current crisis effects and the challenges that the decision makers have to face in this context. The paper ends with several conclusions.

The research methodology used in our research starts with the literature review, in order to point out the importance of the topic approached by our paper. The analysis conducted in this paper is based on official statistics from the ECB, other central banks, the IMF, and different reports and researches.

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Based on the methodology, the paper highlights the central importance of the market of bank loans granted to households for a country's economic and financial stability.

2 Literature Review

In the last few years preceding the beginning of the global economic crisis, most of the Central and Eastern European countries have recorded an accelerated dynamic of the bank loans, especially of the loans granted to households. Such an evolution drew the attention of a significant number of researchers, who were concerned with both identifying its determinant factors and finding the answer to the question whether the rapid growth of the bank loans illustrates a progress in terms of financial convergence or it is a non-sustainable increase, which leads to a series of macroeconomic and financial imbalances. Thus, Égert, Backé and Zumer [7] analyzed the private credit to GDP equilibrium in 11 Central and Eastern European countries, for the period 1990-2004, and concluded that, on the whole, the private credit to GDP ratio in CEE countries did not exceed the equilibrium level, although they registered a considerable credit level growth. Also, Kiss, Nagy and Vonnak [19] analyze credit growth in Central and Eastern European countries using panel estimation for equilibrium level of private credit. Although the research results do not show exactly the existence of a credit boom in the analyzed countries, the authors underline the significant importance of pursuing the credit dynamics within macroeconomic policies.

Comparative, the research performed by Backé, Égert and Walko [3] on new EU member states and Croatia reveals that, in some countries, the private credit percent in the GDP is close to the equilibrium level, whereas in other countries this percent is rather high compared to the economic grounds.

Given the current world crisis, in the most countries it is registered a significant slowing down of the bank loan increase rate, which made researchers become increasingly concerned with identifying its determinant factors. Therefore, based on a sample covering over 80 countries (including the new EU member states), over the period January 2002 to May 2009, Aisen and Franken [1] find that the bank credit booms before the crisis and the GDP growth rate reduction affecting the main trading partners are the most important factors determining the bank credit slowdown phenomenon after the onset of the crisis. Comparative, Bakke and Gulde [4] pointed out that supply shocks were the main factor determining the drop in cross-border lending to emerging markets during the current crisis.

3. Stylised Facts about the Bank Lending Activity in the New EU Member Countries

The countries considered in our research have enjoyed a significant bank lending development over the last decade. This evolution was determined by the action of both external (an international economic environment abounding in cash, low risk aversion and low interest rates, as well as easy access to funds) and internal factors, respectively a significant economic growth, an improvement of the macroeconomic conditions (especially the decrease of inflation rate and interest rate), the implementation of major structural and institutional reforms. This was the background for massive foreign capital input, especially in the bank sector, for consolidated positions of foreign banks on national banking markets, which resulted in the intensification of the, the diversification of the range of bank products and services, and also in bank involvement in new market segments, like for instance the household segment.

One of the most significant characteristics of the bank lending process in the countries under survey is the fast increase of the level of bank loans granted to the economy, between 2005 and 2008, especially in Romania, the Baltic countries and Bulgaria, where the average yearly growth rate was about 51%, over 42% and respectively over 38% (see table 1). In the other countries, on the other hand, this growth rate was more moderate. Due to low domestic savings levels in most of these countries, the fast increase of the level of bank loans granted to the economy was possible by means of foreign funds with low interest rates, since international markets abounded in cash. This may be supported by the loan-to deposit ratio, which, in 2008, exceeded 100% in all the countries, except the Czech Republic (see table 1). The atypical Czech situation points out that the loan level increase phenomenon in this country was funded, in principle, from bank deposits, which enabled the banks to enjoy some sort of independence from foreign financing.

A common characteristic of all the analyzed countries is the much accelerated growth of the loans granted to households, as compared to loans granted to non-financial corporations (see table 1), reason for which they were considered to be the main engine of rapid growth of loans to the economy. In line with the data above, the fastest growths were recorded in Romania, the Baltic countries and Bulgaria, where the average yearly growth rate, between 2005 and 2008, was about 72%, over 46% and, respectively 43.24%.

Another significant feature that influenced the bank lending process in the new EU member states is the high percent of foreign currency-denominated loans (see table 1), which increased foreign exchange risk exposure and, implicitly, created major problems related to financial stability. The Baltic countries distinguished themselves in the analyzed sample, because in this country the foreign currency-denominated loans percent was over 64%, in 2008. The foreign currency-denominated loans in the other countries, in 2008, were 88% in Latvia, 86% in Estonia and 64.6% in Lithuania. In these countries, which enjoyed currency board type arrangements, the foreign currency exchange rate stability and the overwhelming share of foreign ownership in the banking sector were the main reasons that account for the high percent of foreign currency-denominated loans [2]. High percents were also recorded in Bulgaria (which also enjoys a currency board type arrangement), and countries with flexible exchange rate regimes, such as Hungary and Romania, which also saw higher national currency depreciation exposure. On the other hand, the share of foreign currency-denominated loans is moderate in Poland, and much lower in the Czech Republic, especially due to the low interest rate differential. Overall, foreign currency-denominated loans are more frequent in countries with fixed exchange rate regimes (particularly currency board arrangements) where the foreign exchange risk is perceived to be lower than in the countries with flexible exchange rate arrangements, where the foreign exchange risk is considerable.

Table 1. Selected bank lending indicators

	average yearly growth rate of loans* to			loan-to-deposit ratio (%)		Loans denominated in FX (% total loans)	
	economy	non-financial corporations	households	2005	2008	2005	2008
BG	38.57	36.70	43.24	69.8	120.3	47.8	57.2
CZ	26.73	21.50	33.58	63.7	80.9	13.0	14.1
EE	43.01	40.15	46.10	132.10	151.60	79.9	86.11
HU	16.20	10.62	24.18	112.9	137.8	38.6	61.4
LV	43.68	38.75	51.08	112.23	170.06	70.0	88.2
LT	42.98	34.30	58.75	113.38	186.92	65.8	64.6
PL	25.66	16.07	34.02	78.8	119.6	26.2	34.4
RO	50.68	37.83	71.94	80.0	123.8	47.8	57.9

*in 2005-2008

Source: (Own calculations based on data provided by ECB, 2008, 2010, IMF, Country Reports and Raiffeisen Research, 2010)

The high percent of foreign currency-denominated loans in the above mentioned countries was the result of both supply and demand increase. From the point of view of demand, this was stimulated by the interest rate differential between the interest rates for foreign currency-denominated loans and the interest rates for domestic currency-denominated loans, by the relative domestic currency stability and by significant salary increases. As concerns supply, given limited savings levels, the banks preferred to grant loans, as they had easy access to foreign financing.

In all the countries included in our research, loans granted to households were the most dynamic bank loan market segment, for which reason we find it interesting to analyze the structure on destinations of this type of loans, and especially their dynamics.

Considering the structure on destinations of loans granted to households, we noticed the percent of over 50% of housing purchase loans in all the countries, except for Romania and Bulgaria (see table 2), in 2008. Moreover, Romania had an atypical situation, since over 70% (more precisely 74.29%) of the whole loans granted to households were consumer loans, which points to the poor living conditions of the population. Nevertheless, both Romania and Bulgaria saw the fastest increase rate for housing purchase loans from 2005 to 2008, i.e. approximately 60% and, respectively 51%.

Table 2. Key household debt indicators

	structure of 575 of households debt (%)						average yearly growth rate of loans to households*		
	2005			2008					
	housing loans	consumer credit	Other loans	housing loans	consumer credit	Other loans	housing loans	consumer credit	Other loans
BG	28.41	60.63	10.96	42.88	50.13	6.99	68.55	35.21	21.99
CZ	67.54	21.43	11.04	70.51	19.39	10.10	35.63	29.81	28.32
EE	82.16	8.84	9.00	81.24	11.01	7.75	45.08	84.91	31.33
HU	59.97	31.66	8.38	50.56	44.35	5.09	17.35	44.91	-0.16
LV	71.46	14.75	13.79	78.97	12.36	8.67	56.63	41.01	31.68
LT	69.07	16.26	14.67	69.30	14.46	16.25	58.64	58.45	61.70
PL	35.76	37.64	26.60	51.09	26.89	22.02	51.94	22.07	24.43
RO	13.19	84.55	2.26	21.07	74.29	4.65	114.3	64.80	10.32

*in 2005-2008

Source: [Own calculations based on the data provided by ECB, 2008, 2010]

Another outstanding evolution of the structure on destinations of loans granted to households is supported by the faster increase of the number and value of loans for housing purchase as compared to the other two types of loans, especially in Romania, Bulgaria and Latvia. In these countries, the average yearly growth rate between 2005 and 2008 was 114%, over 68% and, respectively over 56% (see table 2). Therefore, the significant dynamics of loans for housing purchase points the fact that this type of loans was the main household loan increase engine.

The rapid growth of the loans for housing purchase was determined by both supply and demand increase. As concerns demand, its increase was stimulated by income increase, by more optimistic future income expectations, by lower interest rates, and in some countries by housing subsidy systems, by favorable tax treatment of housing loans, as for instance the Czech Republic, Estonia, Lithuania and Hungary [9]. From the supply standpoint, the increased inter-bank competition led to the diversification of credit instruments, which have become available at lower costs and longer maturities.

From the point of view of the denomination currency, it can be remarked the high percent of foreign currency-denominated loans (especially Euro) in the housing loan portfolio, which, as mentioned before, caused significantly higher foreign exchange risk exposure for households that failed to take protection measures. For the seven countries shown in the figure 1, except for Bulgaria, the share of these loans is over 60%, in 2008. In this respect, extremely high shares, namely over 90%, were registered in Latvia, Romania and Estonia (see figure 1). By contrast, in the Czech Republic, the foreign currency lending of households is almost inexistent (below 1%) and is therefore not reflected in the figure below.

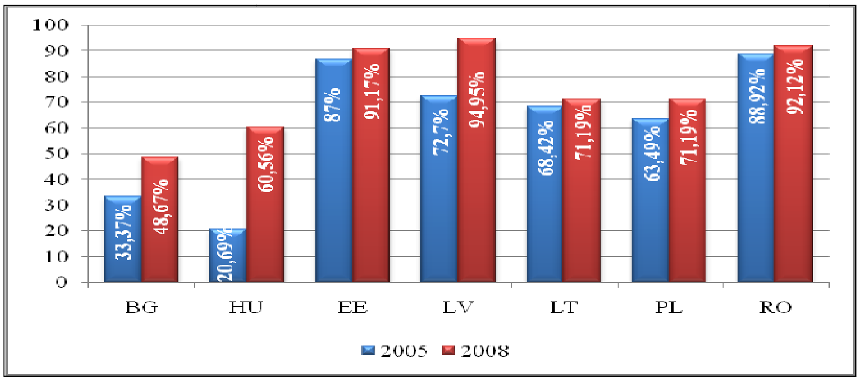


Figure 1. Share of foreign currency-denominated loans in housing loan portfolio in 2005 and 2008

Source: [ECRI, 2010]

4 Effects of the Rapid Growth of the Loans to Households and Measures Adopted by Authorities

The extremely rapid growth of the bank loans, especially of loans granted to households, caused, by its effects, important macroeconomic and financial imbalances.

According to the IMF study [17], which analyzes the credit booms on emerging markets between 1970 and 2002, there is a 70% probability that a credit boom may coincide with a consumption or investment boom.

ECB [10] points out that during the last years prior to the beginning of the current world crisis, in several Eastern and South-Eastern European economies, the fast lending level increase process was accompanied by a set of macroeconomic and financial vulnerabilities.

If we return to our sample, we notice that in many countries the pronounced increase of loans was accompanied by macroeconomic and financial imbalances.

At macroeconomic level, the extremely rapid growth of the loans granted to households in most new EU member states led to considerable domestic demand increase and implicitly to a consumption increase, which became the main production growth engine. On the other hand, given the insufficient supply, the domestic demand increase, considerably funded at the expense of loan increase, put pressure on inflation and increased current account deficits to very high and even alarming levels, especially in Bulgaria, the Baltic countries and Romania, especially in 2007 and 2008 (see table 3). Also, the deepening of the current account deficit was also due to the marked increase of mortgage loans and house prices, which resulted into a boom in the building sector, which, in its turn, increased import demand. Therefore, we refer here to the countries with the highest loan increase rates, and which were hence exposed to external financial vulnerabilities. Financially speaking, the significant increase of the mortgage loan levels, and among this the increase of the foreign currency-denominated loans and variable interest rate loans, led to a significant increase of house prices, to higher foreign exchange and interest rate risk exposure of households, to higher lending risk for banks and to their exposure to the real estate market evolution.

Table 3. Evolution of the current account balance and domestic demand, between 2006 and 2010

	Current Account Balance to GDP (%)					Domestic demand, volume*				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
BG	-17.6	-25.2	-23.2	-9.0	-1.5	10.8	8.8	6.5	-12.8	-4.6
CZ	-2.1	-2.6	-0.8	-1.2	-2.3	5.4	5.2	1.2	-3.7	1.4
EE	-15.7	-17.2	-8.8	4.5	2.8	16.5	9.6	-11.0	-23.4	1.4
HU	-7.7	-7.0	-6.9	-0.4	1.7	1.4	-1.3	0.8	-10.8	-1.1
LV	-22.5	-22.3	-13.1	8.6	3.6	18.1	12.4	-10.1	-27.6	-0.9
LT	-10.4	-15.1	-13.1	2.6	1.8	9.1	14.1	3.2	-24.6	1.8
PL	-3.0	-5.1	-4.8	-2.2	-3.1	7.3	8.7	5.6	-1.0	4.0
RO	-10.6	-13.6	-11.4	-4.2	-4.2	12.9	14.2	7.3	-12.9	-1.0

***** percentage change on preceding year

Source: [European Commission, 2011]

The extremely rapid growth of the loans granted to households and especially of foreign currency-denominated loans, as well as the macroeconomic and financial vulnerabilities triggered by it, led to particular reactions of central banks and supervisory authorities in the countries under survey, mainly materialized in the adoption of monetary policy, prudential, regulation and supervision measures, and also administrative measures, designed to reduce the rapid growth of credits. But, overall, the effectiveness of these measures was limited, especially considering that in the countries under survey the full capital mobility is a reality. On the other hand, the maintenance of the high share of foreign currency-denominated loans contributed to the maintenance of banks exposure to foreign exchange risks. All this does not mean less vigilant central banks and supervisory authorities on the issue of foreign currency-denominated loans. Moreover, and given today's situation, the problems created by foreign currency-denominated loans to financial stability and money policy efficiency made the authorities from various countries to adopt new measures. For example: the Hungarian Parliament passed a regulation that banned the granting of this type of loan, in August 2010, whereas Poland intends to impose a 50% ceiling for the share of exposures open to FX risk in the entire bank's portfolio of retail credit exposures financing real estate, introducing the obligation for the bank to justify the adopted maximum level of loan-to-value ratio (LTV) etc.

5 Impact of the Current Crisis on Bank Loans Granted to Households

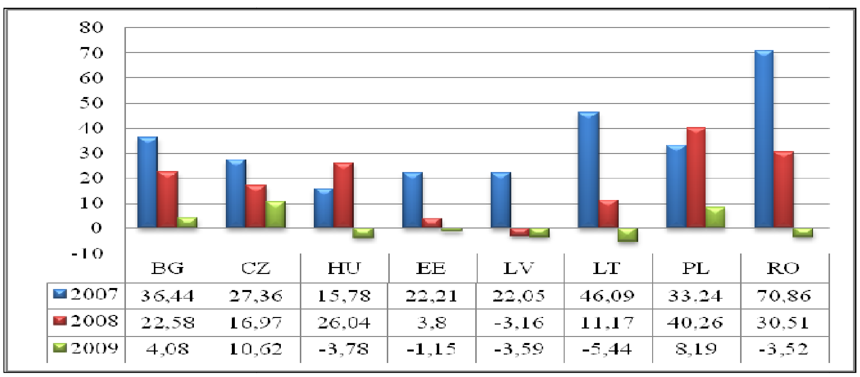
The current global crisis has stopped the accelerated dynamic, expressed through two digits growth rates, of the loans granted to the economy, including of the loans granted to households.

The diminishing of the loans granted to households in the analyzed countries has been determined by a rapid and significant contraction of the supply and the demand of credits. The reduction of the supply was determined by liquidity issues that existed on the international financial markets and which have affected the foreign banks that had subsidiaries opened in the analyzed countries and also by the increased risk aversion of the banks, which have raised their standards and terms in regard to credit operations.

The decrease of the demand for loans was determined especially by the increase of the credit costs, the depreciation of the national currencies from the analyzed countries and the high volatility of the exchange rates and also by lower income levels, higher unemployment rates and employment uncertainty. Under these circumstances, the year 2009 saw a drop in the real growth rate of loans granted to households in all the countries under survey, with particular differences (see the figure 2). From this point of view, we may distinguish three groups of countries. Thus, the first group includes Poland, the Czech Republic and Bulgaria, where the drop was less significant and the loan expansion ratio remained positive. Such an evolution was possible as a result of some repurchases of loans by parent banks, in the case of Bulgaria, higher independence from international financing in the case of the Czech Republic, higher domestic capital presence in the banking sector in Poland and, last but not least, due to the fact that these countries managed to maintain a relatively low positive economic growth during this period. There is also a second group, including Lithuania, Latvia, and Estonia, where the growth rate was negative, and a third group of countries, comprising Romania and Hungary, where the household loan market practically crashed by 34% and 30%, respectively, in 2007 and 2008.

The pronounced reduction of the bank lending activity has had significant implications for the housing market, leading to a dramatic decrease in housing prices and hence to lower the real estate collateral, with threats to financial stability. For example, in the case of the analyzed countries, the house prices dropped pronounced between September 2008 and the fourth quarter of 2010, especially in Latvia with more than 52%, Lithuania and Estonia by 46% [20]. Such a price change had a negative impact on the consumption by the direct wealth effects, but also by the impact of lower guarantees on the access to credit.

The economic and financial status of a significant number of households deteriorated due to economic recession, income decrease, unemployment rate increase, national currency depreciation and assets value decrease (especially real estate assets).



	BG	CZ	HU	EE	LV	LT	PL	RO
2007	36,44	27,36	15,78	22,21	22,05	46,09	33,24	70,86
2008	22,58	16,97	26,04	3,8	-3,16	11,17	40,26	30,51
2009	4,08	10,62	-3,78	-1,15	-3,59	-5,44	8,19	-3,52

Figure 2. Real annual growth rates of total credit to households in 2007-2009

Source: [ECRI, 2010]

Moreover, some households were unable to pay their debts to banks, which led to the deterioration of the quality of the banks credits portfolio. Unavailability of the statistic data in the studied countries does not allow us to empirical highlight the share of nonperforming loans for households. But, on the whole banking sector in the surveyed countries, there was an increase in the ratio of non-performing loans (see table 4), especially in Latvia, Lithuania and Romania. In this context the banks were forced to create additional provisions which had an important impact on their profitability. Thus, the profitability indicators were substantially depreciated, especially in the Baltic States.

Table 4. Selected financial soundness indicators*, 2008-2010

	Bank non-performing loans to total loans			ROA			ROE		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
BG	2.5	6.4	11.9	2.1	1.1	0.9	23.1	10.2	7.9
CZ	3.3	5.4	6.6	1.2	1.5	1.4	21.7	25.8	23.1
EE	1.9	5.2	5.4	1.2	-2.8	0.3	13.4	-24.6	2.1
HU	3.0	6.7	9.1	0.8	0.7	0.1	11.6	9.4	1.3
LV	3.6	16.4	19.0	0.3	-3.5	-1.6	4.6	-41.6	-20.4
LT	4.6	19.3	19.7	1.0	-4.2	-0.3	13.5	-48.4	-4.7
PL	4.5	8.0	8.8	1.5	0.8	1.1	20.5	10.4	12.7
RO	2.8	7.9	11.9	1.6	0.2	-0.1	17.0	2.9	-1.0

*BG, EE,HU, LV, LT, PL, RO – December; CZ - September

Source: [IMF, 2011]

The major implications of the current global crisis on European economies and bank sectors, in general, triggered unprecedented reactions both from the European Commission, the IMF and the EBRD, and from national monetary and governmental authorities, which were materialized in the adoption of a large number of measured designed to support the bank sector and to help it resume the normal lending activities specific to a real economy. The adopted measures managed to prevent the crash of the bank sector and the revival, yet slow, of the bank lending business, especially of household loans.

The macroeconomic and financial imbalances occurring in the countries which, in the years preceding the onset of the current global crisis, enjoyed a fast, yet often non-sustainable, increase of the level of loans, especially those granted to households, and also suffered from the extremely negative effects of crisis on the bank sector, reveal the existence of a number of major shortcomings blamed on the institutional and regulating framework of the international financial system. Thus, there were intensified the financial system reform efforts. From the regulation standpoint, the passing by the Basel Committee on Banking Supervision of the Basel III Accord is very important from the point of view of the bank lending activity, as it refers to a crucial macro-prudence instrument, namely the "countercyclical capital buffer", which is designed especially to prevent excessive lending and the bank sector crash [5]. As for the institutional framework, for instance, the EU implemented, as of January 1, 2011, the European System of Financial Supervision, which has as the major goal the macro-prudential supervision of the financial EU system.

At the level of the whole banking sector, in order to prevent a future unsustainable growth of bank loans, the main challenge according to the officials of the National Bank of Romania is represented by the change of the business model of the banking sector [21].

Under the present circumstances, we may state that the central banks and supervisory authorities are currently faced with new challenges related to the credit market, especially as concerns household loans. From this point of view, one of the challenges is related to the high share of foreign currency-denominated loans, given the limited domestic savings level. Thus, the authorities should channel their efforts towards designing and implementing solutions meant to develop national currency markets, to strengthen the cooperation with the authorities in the countries of origin of foreign banks, and also to thoroughly promote awareness raising campaigns among households on the risk of foreign currency over-indebtedness. Another challenge is related to mortgage loan market, which, unlike consumer loan market, has not been regulated yet by specific European regulations.

5 Concluding Remarks

In the years preceding the current global crisis, in the analyzed countries, loans granted to households were the most dynamic segment of the bank loan market.

The extremely rapid growth, expressed through two digits growth rates, of the loans granted to households, especially of foreign currency-denominated mortgage loans, resulted into the marked increase of the household indebtedness and risk exposure levels, and we refer here especially to foreign exchange and interest rate risks.

In most of the analyzed countries, the highly dynamic evolution of loans granted to the economy, in general, and to households, in particular, brought about significant macroeconomic and financial imbalances. Macro-economically speaking, some countries had higher inflation rates, higher current account balance deficits and higher external debt levels. Financially speaking, the significant mortgage loan levels increase, and, among them, the foreign currency-denominated or variable interest rate loans, led to a significant increase of house prices, to higher foreign exchange and interest rate risk exposure of households, to higher lending risk for banks and to their exposure to the real estate market evolution.

The current crisis stopped this rapid growth of the bank loan and aggravated the financial status of many households in the EU. Economic recession, the cash availability problems encountered by international financial markets, the more restrictive lending standards and terms, the depreciation of some national currencies and the exchange rate volatility, as well as the negative economic growth and unemployment rate perspectives, slowed down the rate of loans granted to households in all the analyzed countries, yet with certain differences. Therefore, the countries that suffered the most severe macroeconomic and financial imbalances were the most affected by the crisis.

The serious imbalances suffered by some countries due to extremely fast, and often unsustainable bank loan levels increases, and also the extremely negative effects of the current crisis on those countries, underline the major role played by the household loan market in ensuring economic and financial stability. From this point of view, the central banks and supervisory authorities are facing new challenges related to risk management improvement and to the enforcement of stability-enhancing supervision regulations.

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