Bank Lending Dynamics in Bulgaria

Peter Peshev*

Summary:

This paper analyzes factors for the dynamics of bank loans of non-financial firms and households in Bulgaria in the 2008-2012 period. Following a short introduction, credit demand factors are presented and analyzed first, followed by an analysis of general credit dynamics and of credit supply factors. The pre-crisis double-digit growth of bank loans extended to the non-financial companies and households was induced by strong external and internal demand and by enormous capital inflows. In the post-2008 period a process of deleveraging took place, a period of modest lending because of the weakness in demand factors. Namely, poor economic recovery was the main driver of the non-performing loans uptrend, which harmed the credit supply process.

Key words: bank credit, bank credit demand, bank credit supply, crisis,

JEL Classification: E32, E44, E51, E58, G01.

Introduction

The Bulgarian economy progressed phenomenally in the years prior to the global financial crisis, which hardly hit it. In the five-year period ending in 2008, GDP expanded by a hefty rate of 6% per year in real terms, while financial intermediation deepened with double-digit growth rates yearly. Bank lending was one of the factors for the outpacing economic growth in Bulgaria, as it has been confirmed by Stattev (2009). The outstanding bank loan growth was triggered by foreign capital inflows, aggressive lending of commercial banks, galloping exports and strong internal aggregate demand. However, inflation, current account and external debt ballooned, signaling for an overheating economy and for an internal and external imbalances formation. The global financial crisis revealed this economic weakness in 2009 in the slumping external demand and capital outflows, and in the plummeting the foreign direct investments and increased risk aversion of economic agents. Economic recovery remained modest in the following years to the end of 2012. Deteriorating economic activity led to a rapid growth of non-performing loans. Banks became more demanding on their existing and potential customers, and intensified on accumulating capital and liquidity buffers.

This paper analyses the 2008-2012 bank lending activity in terms of determinants of bank loans demand and supply. A pre-crisis dynamics is also considered for making this analysis more reasonable, presenting the pre-crisis process of building up imbalances during the boom period, followed by economy and finance sector

* PhD student, Department of Economics, University of National and World Economy, peshevpetar@gmail.com

deleverage. General economic development is considered first as a factor for the demand for the non-financial sector bank loans. The analysis continues with review of lending activity dynamics, followed by an analysis of determinants of the supply of bank loans to the non-financial sector.

1. General economy dynamics

The open economy of Bulgaria went through a period of impressive economic growth since the beginning of the millennium until the onset of the crisis in late 2008, when the international conjuncture sharply deteriorated. In the 2008-2012 period the Bulgarian economy viability was put under a tremendous hardship. A complex symbiosis between different factors, that are largely interconnected, contributed to the outstripping pace of economic growth until the beginning of the crisis (4th quarter of 2008). Among the important factors are: 1) the stability of the local currency and that of the financial system, both backed by the currency board arrangement (CBA) and by the conservative monetary and supervisory policies of Bulgarian National Bank; 2) bank privatization and the accompanying transfer of know-how and innovation; 3) the lending activity of commercial banks; 4) the succession of fiscal policy of budget surpluses; 5) foreign direct investments; 6) domestic and foreign aggregate demand; 7) EU membership and the related synchronizing of legislation and institutions; 8) favorable international conditions; and other factors. Of course, such rapid development in the pre-crisis period brought about some side effects, such as the formation of internal and external economic imbalances. Growth was accompanied by high inflation, unsustainable large current account deficits and rapidly increasing external and internal indebtedness. As a result of the crisis this tendency changed diametrically, that is to say there was a process of deleverage and imbalances clearance.

In the five-year period ending in 2008, growth intensified. GDP grew on average by 6.4 % per year (compound annual growth rate), exceeding considerably the economic growth rate in the developed world. In the subsequent period, from late 2008 to the end of 2012, GDP at constant prices decreased by 0.7% annually. During the worst crisis year for the Bulgarian economy in 2009 GDP shrank by 5.5%. The 2009 slump was experienced by all aggregate expenditures components, but the largest contribution to the economic downturn was the collapse of exports (decreased by 11.2% year on year in real terms) and the fall in gross fixed capital formation (shrinking by 17.6%). The economy recovered by 0.2% in 2010, by 1.8% in 2011, with external demand contributing the most to this overall weak economic revival. In 2012 economic growth dropped to 0.8%, triggered mostly by the pickup in consumption and changes in inventories.

In the period between 2004 and 2008, the harmonized index of consumer prices (HICP) rose by 8 % annually (CAGR), and in the 2008-2012 period price increase rates fell to an average rate of 2.8 % per year. However, the decline in domestic demand during the 2008-2012 period reduced inflation. In the second period major contributors to price index increase were the goods and services with administered prices, food and energy products, with HICP converging to the EU average values in the period.

Labor market mimicked economic developments in the period of high economic growth, as employment was rising while unemployment was falling. The unemployment rate at the end of 2008 plummeted to its lowest level for the whole transition period of 5.7%. As a consequence of the crisis, unemployment began to increase, and at the end of 2012 the number of unemployed stood at 12.4% of the labor force. In the years of growth after the crisis (2010, 2011, 2012) labor productivity rose, but given that the creation of new jobs requires higher growth rates, it remained one of the biggest concern in the economy. The high rate of unemployment has been understandably restrictive factor for the demand for bank credits, but it has a lagging nature.

Fiscal policy is a factor of economic activity, but predictable and balanced fiscal policy is one of the two pillars on which the CBA (currency board arrangement) rests, i.e. the financial system and the economy as a whole. The second pillar on which the currency board rests is the stable banking system that is supported by anti-cyclical monetary policy and conservative bank supervision.

All Bulgarian governments since 1997 until the beginning of the crisis adhered to the policy of balanced budgets. In the years of high economic growth revenues often exceeded government expenditures, allowing the accumulation of fiscal buffers. During the 2004 –2008 period, state budget surplus was with an annual average value of 2.7% of GDP. Bulgarian governments reduced public indebtedness and generated buffers during that period, which later helped them to issue new debt at reasonable costs and use fiscal buffers for financing the deficits during the 2008 - 2012 period, with expenditures exceeding government revenues by an annual average of 1.8% of GDP. Public debt declined to 15.5% of GDP at the end of 2008 but increased to 18.5% of GDP at the end of 2012. Even in the period after 2008, the Bulgarian governments maintained a conservative fiscal policy, which placed the country among the EU leaders with one of the lowest budget deficit and public debt levels post-2008 period.

During the 2004-2008 period the Bulgarian economy operated in an environment of growing external indebtedness, unsustainably large current account deficits (on average of 16.8% of GDP yearly) and a surplus on the capital and financial account (on average of 21% of GDP yearly). There was a process of reduction of external indebtedness post 2008, accompanied by a moderate current account deficits (even a surplus was registered in 2011) and capital account surpluses (although in 2010 and 2011 the balance on the financial and capital account turned negative by 1.1% and 1% of GDP respectively).

At the end of 2004 the gross external debt (GED) stood at 61.7% of GDP, though this indicator rose until the end of 2008 to 105% of GDP. In the next period external indebtedness started to decrease, and reached 94.8% of GDP at the end of 2012. This development was due to the faster nominal growth of the denominator. In the 2008-2012 period commercial banks reduced their obligations to the external sector by BGN 2.6 billion (by 29%), while intra-company loans increased by BGN 2.1 billion (by 15.3 %) and public external debt increased by BGN 850 million (by 9%). The situation with gross external indebtedness is not so worrying because 58% of GED consists of debt between banks and their foreign bank headquarters, and between local companies and their foreign parent companies, i.e. a withdrawal of speculative capital that harms the financial system and the economy as a whole is impossible.

Weak domestic demand, capital outflows and insufficient foreign investment failed to be offset by growth in exports. Because of the combination of these factors and because of the economic uncertainty in EU, households and businesses remain cautious in their expectations, i.e.

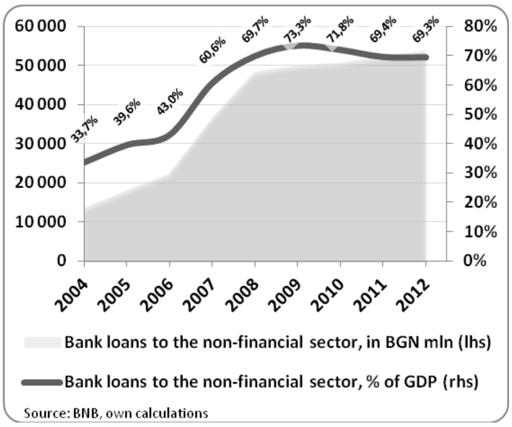

Fig. 1. Non financial firms and households bank credit dynamics

economic activity remained poor. Their risk aversion was high during the period, resulting in a weak entrepreneurial activity and weak bank loans demand. Prudence of economic agents is undermined also by the decline in the prices of financial and real assets (commercial and residential properties) by influencing their behavior through the wealth effect and the effect of the balance sheet, as shown in the results of Blundell-Wignall and Gizycki (1992), Pazarbasiog1u (1996), Altunbas et al. (2009) and Gambacorta and Marqués – Ibáñez (2011).

Interest rate dynamics is supportive for the hypothesis that the end of 2008 brought a structural break in the economy of Bulgaria. Nominal and real interest rates on deposits and loans rose swiftly as a result of the crisis development. Banks had to replace parent financing with local deposits, and as a result the rates on deposits increased. The cost of funds rose, and additional risk factors contributed to the increase in the interest rates on loans. In 2007 and 2008 the real interest rates stood at an average of 1.5%, while in 2009, 2010, 2011 and 2012, they reached 6.7%, 8.1%, 5.5% and 7.4% respectively.[1]

2. Bank loans and factors of credit supply (dynamics)

The financial sector, which is dominated by the banking sector in Bulgaria, is in complex relationships with the real economy. Studies with high probability prove that money is not neutral and that the dynamics of the financial sector is at once a consequence of and a factor for economic growth. Empirically verified in the work of Stattev (2009) is that in Bulgaria there is a two-sided causality between the real economy and the financial sector.

Rapid economic growth in the period between 2004 and 2008 was accompanied by even faster growth rate of bank loans to non-financial companies and households. During the period cumulative loans increased on average by 37.7% per year (geometric mean), however, measured as a ratio between bank loans and GDP the growth rate, they amounted to 18.9 % annually. Erdinc (2009) has described the rapid credit growth in Bulgaria and

[1] According to the World Bank data.

Romania in the 1999-2006 period as a catching-up process. On the other hand, rapid credit growth can be seen as a reason for the formation of imbalances, which at some point materialize and challenge the financial system and the economy as a whole. In this vein is the study of Duenwald et al. (2005), which analyzes the credit boom in Bulgaria, Romania and Ukraine. Using a database of various banking crises, authors conclude that in the five years before the positive trend in the financial sector and the economy abruptly changed the bank loans to GDP increased on average by 5.2 % per year, upon which a fast decline of the rate of change, or even a decline in the ratio started. Rapid credit growth leads to macroeconomic imbalances and further deterioration in credit quality (see ibid.). The loans to GDP ratio in Bulgaria started to decline after 2009, albeit at a paltry pace, on the assumption that the imbalances formed during the catching-up process are in a process of clearance, i.e. a process of deleverage was underway.

In the 2008-2012 period bank loans in Bulgaria increased in nominal terms by 2.7% annually, while the ratio between loans and GDP decreased by 0.2% annually, prompted by faster growth of the nominal value of the denominator. Loans in the Bulgarian banking system managed to increase in nominal terms, even in a period which was the most unfavorable for the Bulgarian economy year. Loan growth in 2009, however is due largely to the past net purchase of credits granted by commercial banks, which amounted to BGN 1.5 billion. Over the next three years the net amount of loans increased more slowly because commercial banks sold loans, stripping from their gross loans holding, a process that can be seen in the table.

Table 1. Non-financial sector bank loans indicators

Year	*Bank loans*	*Bank loans (stock values) in BGN mln.*	*Bank loans (volume) in BGN mln.*	*∆Loans(stock)/ loans (volume), %*	*Loans (volume)/ loans(stock), %*
2008	3 019 504	48 348	21 947	53.4%	59.9%
2009	3 004 628	50 080	13 321	13.0%	27.6%
2010	2 763 350	50 692	12 581	4.9%	25.1%
2011	2 655 401	52 334	18 046	9.1%	35.6%
2012	2 734 408	53 808	18 513	8.0%	35.4%

Source: BNB, own calculations

The volume of new businesses on loans was highly volatile during the period between 2008 and 2012. In 2010 the volume of newly lent loans decreased by 43% compared to

2008, followed by a partial recovery. In 2012 new business on loans totaled BGN 18.5 billion, which is 15.6% below its value at the end of 2008, and similar dynamics is seen in the number of credits. As a result of negative economic development after 2008 the number of sold and written-off loans began to decline after 2009, and by the end of 2012 the indicator shrank by 9.4 % (compared to 2009), despite the 3% annual growth in 2012.

Change in loans (stock values) in 2010, accounted to 4.9 % of the change of newly lent loans during the year, while in 2012 the ratio between change in stock values and change in loans in terms of new business stood at 8%, compared to 53.4% for 2008. In summary, as a result of the changes in economic conditions the number of loans declined, while the volume of newly lent loans guaranteed the minimum nominal growth of loans (stock values), that is, the portion of loans maturing are replaced with larger nominal.[2] The volume of new bank loans offset maturing loans. These developments came to show that the turnover of loans was increasing at the expense of diminishing maturity, i.e. banks and their customers were not willing to take on long-term commitments.

The dynamics of the ownership of assets also deserves attention. Banks with Bulgarian majority/controlling ownership increased their share in the assets of the banking system, controlling a share of 26.5% as of the end of 2012, compared to 16.1% at the end of 2008. Banks owned by Bulgarian entities appeared to be more active in the 2008-2012 period, and they also managed to become a major contributor to credit growth (in nominal terms). This process is probably due to their local expertise, that is, to a better understanding of the economic situation in the country and better information available about local customers. If we add the problems of foreign parent banks, the Bulgarian client regained confidence in domestic-owned banking institutions. This is already an examined process of regaining market share for local banking groups, which is quite the opposite of the process from the beginning of the millennium, when many foreign financial institutions entered the domestic market, attracted by the low level of financial intermediation and by the good economic prospects. As a result of the crisis, some of the international banks with local presence left the host country, due to liquidity problems and the financial problems of the parent bank, or because of changed conditions of doing business in the country. It is not uncommon buyers of the branches were domestic entities, who appear to be more adaptable to new conditions and to have better knowledge of local business conditions (e.g. Tschoegl, 2003 and Demirguc-Kunt. and Huizinga, 1998). This in turn reduced the impact of external factors on the system, but increased the risk due to possible increase in exposure (assets and liabilities sites) to related parties.

In the period from late 2008 until the end of 2012 the loans to businesses increased by 16%, while loans to households rose by 3.4%. Housing mortgage loans to individuals rose by 15.5% over the same period, while consumer loans climbed by a modest 0.6%.

[2] This development is supported by the sale of existing loans, mostly with a deteriorated profile

Overdrafts and other loans to households experienced a double-digit decline, but because of their low weight in the credit mix, they did not have a serious effect on the bigger picture. At the end of 2012 loans and advances to non-financial corporations accounted for a 58.4% share of banks' total loans, with households having a 28% share, compared to 56 % and 30 % as of 2008. The Bulgarian banking system differs from EU banking systems in terms of the bigger share of loans to companies than those to households.

Banks in Bulgaria stuck to a traditional business model, largely ignoring the operations involving financial instruments and derivatives. In the 2008-2012 period loans to non-financial private sector dominated the banking assets, mainly financed by the deposits of households and firms, while foreign liabilities, due primarily to parent banks, lost their relevance as a source of financing. Bulgarian banks largely immunized themselves from international financial markets' conjuncture, of course, at the expense of growing interdependence with the local economy.

In 2012 the system improved its position with regard to liquidity and capital, and was more independent in terms of external financing compared to 2008. Banks significantly increased the share of liquid assets in their total assets as of 2012, with a liquidity ratio of 23% compared to 16.8% at the end of 2008. Cash and cash balances with BNB rose by 41% to BGN 9.5 billion, debt instruments holdings rose by 90%, to BGN 9.3 billion. Banks in Bulgaria also managed to increase the coverage of loans with deposits of non-financial firms and households, with BGN 1 of loans to companies and households being covered by the BGN 1.02 of deposits of non-financial firms and households, compared to BGN 0.85 of deposit covering BGN 1 of loans at the end of 2008.

In 2012 the banking system was not only more liquidity secured compared to 2008, but was also more capital adequate. The total capital adequacy ratio increased from 14.9% in 2008 to 17.6 % in 2011, falling to 16.9 % in 2012, due to the policies of BNB to amend the reporting of specific provisions for credit risk, which directly reduced bank equity. Banks' equity to assets ratio rose to 13.2 % at the end of 2012 (BGN 1 of equity supports BGN 7.6 of assets), compared to 11.4% at the end of 2008 (BGN 1 of equity supports BGN 8.8 of assets). The equity to loans ratio also improved significantly, rising from 13.9% at the end of 2008 (BGN 1 of equity supports BGN 7.2 in loans and advances lent) to 16.8 % at the end of 2012 (BGN 1 of equity supports BGN 6 in loans and advances lent). The improvement in the capital position during the period was due to a BGN 1.2 billion increase (growing by 46 %) of the issued capital of commercial banks and to a bigger extent to the accumulated reserves from retained earnings from previous years, which increased banks' capital by BGN 2.2 billion, or by 62%.

In 2012 non-performing loans non-serviced for more than 90 days increased to BGN 9.6 billion, which corresponded to 16.6% of gross loans (excluding loans to credit institutions), while in 2008 the amount of loans overdue more than 90 days stood at 2.8 % of gross loans. However, the trend in non-performing loans, non-serviced more than 90 days is ascending, but the pace of growth decreased in 2009, as well in 2010 and 2011, with values of 6.4%, 11.9% and 14.9% for the indicator for each year. The slowing pace of growth of classified loans was prompted by commercial banks' policy of selling and writing off outstanding loans and the acquisition of collaterals. The dynamics of bad loans raises concerns, though it is largely a function of the economic environment. On the other hand, the system accumulated large buffers to neutralize the effects of the rising bad loans. At the end of 2012 non-performing loans non-serviced for more than 90 days were covered at 70.5% with loan loss provisions (BGN 6.8 billion). In addition, a value of BGN 2.9 billion is not covered with loan loss provisions as of the end of 2012, accounting for 26.3% of banks' equity, which is a manageable situation, even a worst case scenario for all the not serviced, by more than 90 days loans to be written off. Furthermore, for the majority of loans was available liquid collateral with a value higher than the residual value of not bad loans. In 2011 the BNB extended the deadline for the realization of collateral, allowing commercial banks to achieve a higher price of the collateral, or reintegrate higher values of loan loss provisions. Beck et al. argue that non-performed loans are a function of the economic activity and the interest rates on loans, rising with the deteriorating economic conditions and with the jump in interest rates.

In the analyzed period banks changed the currency structure of their assets and liabilities. The currency component decreased in borrowed funds (from 60.2% to 51.9%), mainly due to higher interest rates on BGN deposits, because of the pick up in confidence in the financial system. However, the currency component gained share in the structure of bank loans and advances (from 60% to 65.4%), probably because of the demand for lower interest costs on foreign currency loans (mainly euros). As of the end of 2012 61.3% of assets and 45% of liabilities were denominated in foreign

Table 2. Banking income and ratios

	2008	2009	2010	2011	2012
Banking income, BGN mln.	3 710	3 792	3 932	3 914	3 816
Administrative expenses, as % of banking income	44.7%	44.4%	43.0%	44.2%	46.0%
Impairment of financial assets, as % of banking income	8.9%	27.4%	33.5%	33.0%	31.7%
Net income, as % of banking income	37.4%	20.6%	15.7%	15.0%	14.9%

Source: BNB, own calculations

currency, compared with 57% and 53% respectively as of the end of 2008.

As a result of the deteriorating economic conditions, the profitability of commercial banks decreased significantly. Net banking income in 2012 fell below its 2008 value by 59%. However, 2012 net banking income rose by 2.8% compared to 2008, and administrative expenses increased by 5.9 percent, while the costs of impairments jumped by the impressive 266%. Banks have limited their administrative costs trying to offset increased costs for impairment, which stood at 8.9% compared to the net banking income in 2008, but increased to 31.7% from net banking income in 2012. The three-digit growth of impairments is the reason why net profit stood at 14.9% of net banking income in 2012, compared to 37.4% in 2008.

Despite the crisis and the faster growth in loan loss provisions, Bulgarian banks managed to generate net income every year in the period. Thanks to the accumulated profits throughout the years, the system increased its capital base and ability to cushion future losses. BNB issued recommendation whereby commercial banks should not distribute dividends from the profit for 2008, resulting in increased capitalization of the banking system by BGN 1.4 billion. However, commercial banks preserved their non-distributive profit policy for the whole period.

Countercyclical and conservative supervision policy did not allow commercial banks to reach higher credit growth levels during the credit boom, when commercial banks were forced to maintain reserve requirements and capital adequacy above the EU average. Increased reserve requirements, the introduction of marginal minimal required reserves for the banks with credit growth, higher than the adopted benchmark, the conservative policy on collateral, and restrictive licensing policy were only part of the measures that the BNB introduced to slow down the rapid credit growth and create buffers for future risks. Thanks to this conservative policy of BNB, there was not an a single case of saving a commercial bank with public funds, unlike the many instances of spending public funds for bank supportive purposes in EU and around the globe. In the 2008–2012 period the BNB continued its anti-cyclical policy, though this time the central bank introduced mes''asures in favor of increasing liquidity in order to assist commercial banks in managing liquidity and risks.

At the end of 2012 commercial banks had better liquidity and capital position in comparison to 2008, when the Bulgarian economy was still not strongly affected by the negative international financial and economic situation. The lending capacity of commercial banks increased in the analyzed period, but weak loan demand, driven by depressed domestic aggregate demand in the period 2008–2012, prevented the recovery of credit dynamics. Naturally, as a result of the crisis and the deterioration of commercial banks' assets, banks' risk aversion rose, and accordingly banks became more demanding about the quality of borrowers and their collateral.

Conclusion

Banks' lending activity dramatically contracted in the period of 2008-2012, because of the structural break amid the crisis. The demand for credit remained weak and failed to recover to heftier level, as the sluggish economic recovery was the main factor for this situation. Banks entered a defensive mode. They succeeded in replacing parent banks financing outflow with local sources, mainly household deposits, but at the expense of soaring interest rates on the source of financing. Higher interest rates and higher risk factors transformed into higher interest rates on loans. Namely, the weak economy and the rising interest rates were the factors for the rapid growth of non-performing loans, the first factor being the biggest driver. Non-performing loans kept rising throughout the 2008-2012 period, and banks remained too risk averse accordingly. Capital adequacy and liquidity ratios climbed signaling to the defensive bank loans supply.

At the end of the analyzed period banks were better capitalized and more liquid than in 2008, but the risk aversion due to the poor economic activity and the rising non-performing loans kept them aside from active lending.

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