

Analysis of the deleveraging process of non-financial enterprises in Bulgaria

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Motivation

- The current global financial and economic crisis brought about a change in corporate financing triggering deleveraging processes in many countries.
- Many studies focus on corporate indebtedness and economic activity but those are generally scarce for CEE countries.
- In this study we are investigating the behaviour of non-financial corporations (NFC) in Bulgaria in the context of the recent global financial and economic crisis, focusing specifically on the deleveraging process and its impact on firms' adjustment strategies in the period from 2009 to 2013.
- The empirical analysis is done at macro level and at sectoral level

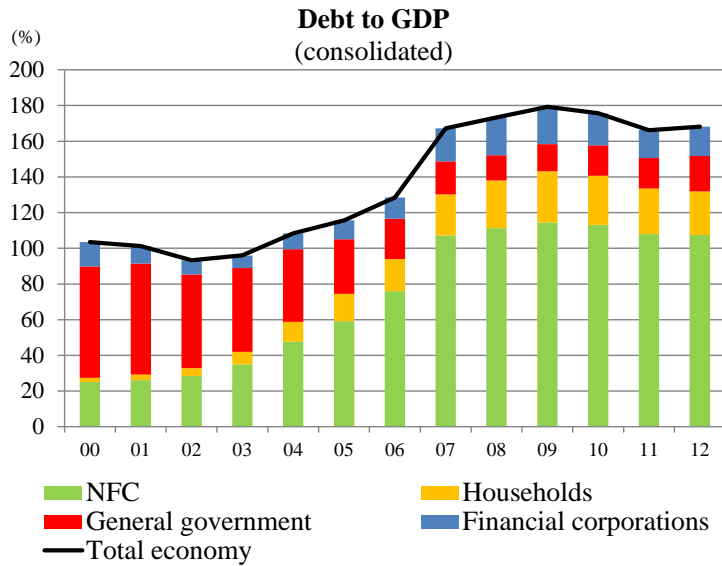
The data

- Data sources
 - Financial Accounts
 - Additional sources—national accounts, monetary statistics, BOP, external debt statistics, corporate balance sheets by sectors of economic activity
- Debt definition
 - *Loans & Securities other than shares, excluding financial derivatives*
 - Broader definition includes *other accounts payable*
 - Choice of appropriate denominators
- Data issues
 - Comparability across countries
 - Consolidated vs. non-consolidated data

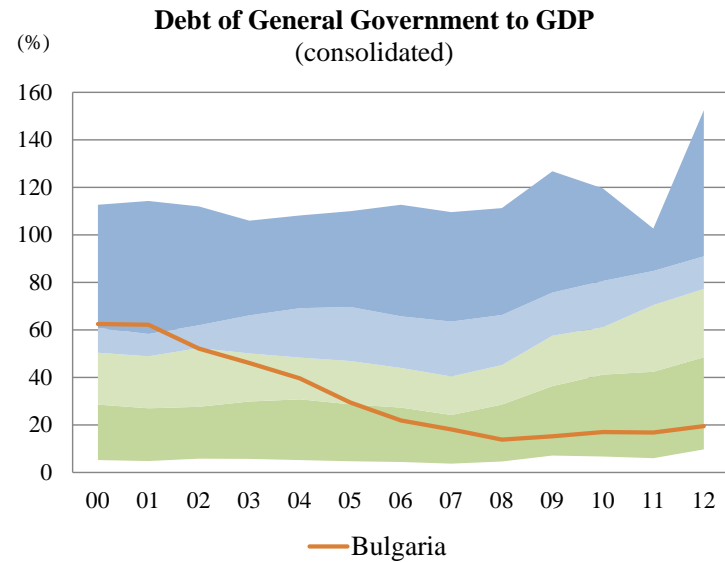
Overall indebtedness in the Bulgarian economy

- A brief review of the literature points to the fact that a combination of various factors both at the macro-level and firm-level plays a significant role for the process of NFC deleveraging as well as for its overall macroeconomic effects.
- At the macro-level of critical importance is whether simultaneous deleveraging is taking place in all sectors of the economy – NFC, households, the financial corporations and the public sector.
- The very low leverage of the public, financial and household sectors in Bulgaria substantially decreases any probability of negative feedback loops within the economy arising from possible developments in the indebtedness of the NFC sector.

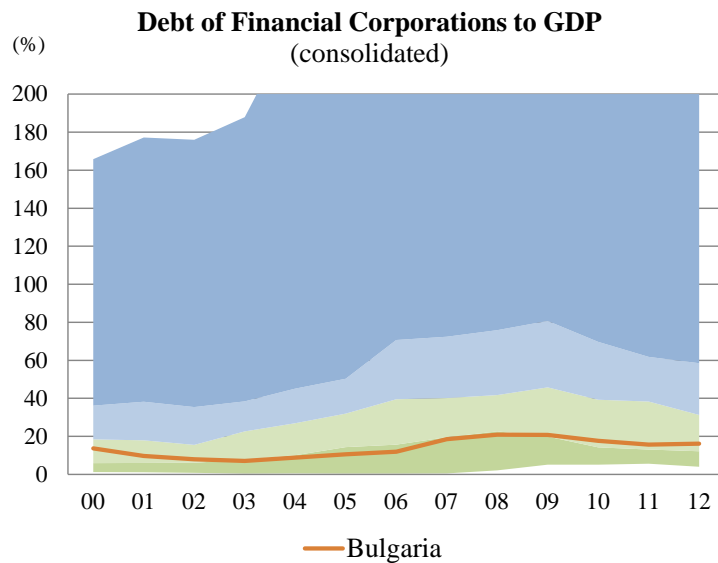
Overall indebtedness in the economy



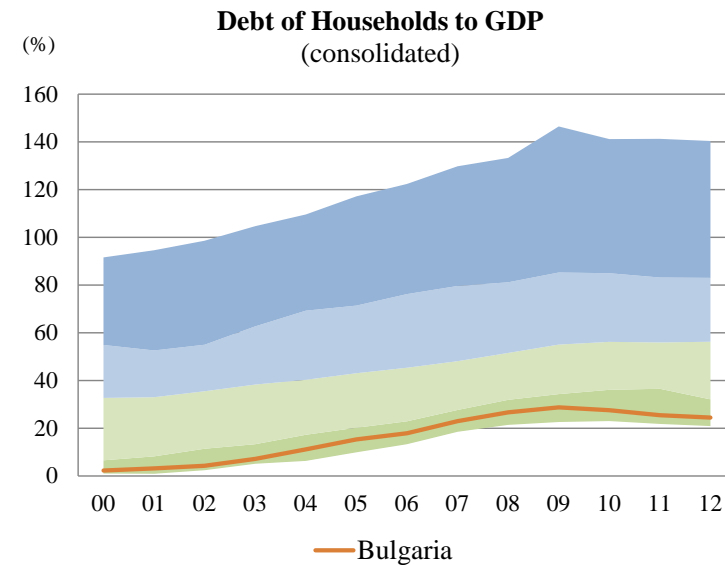
Source: Eurostat.



Source: ECB, authors' calculations.



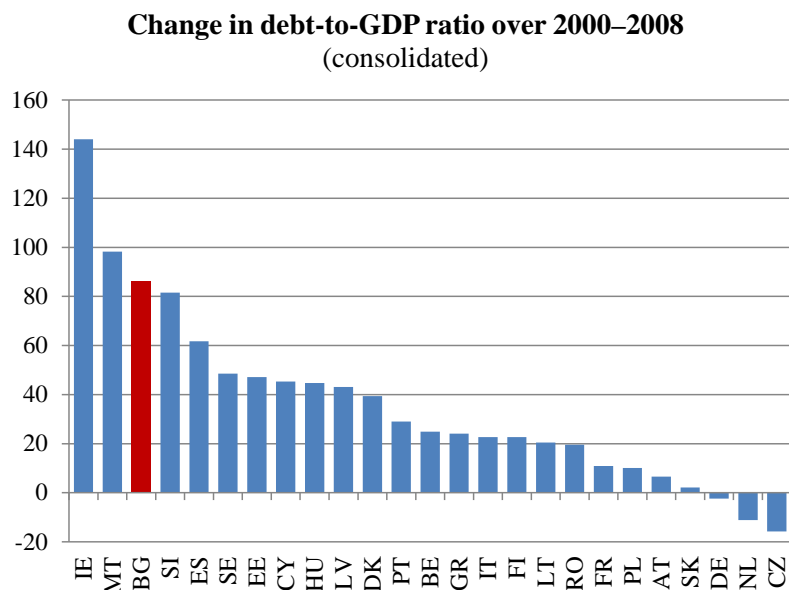
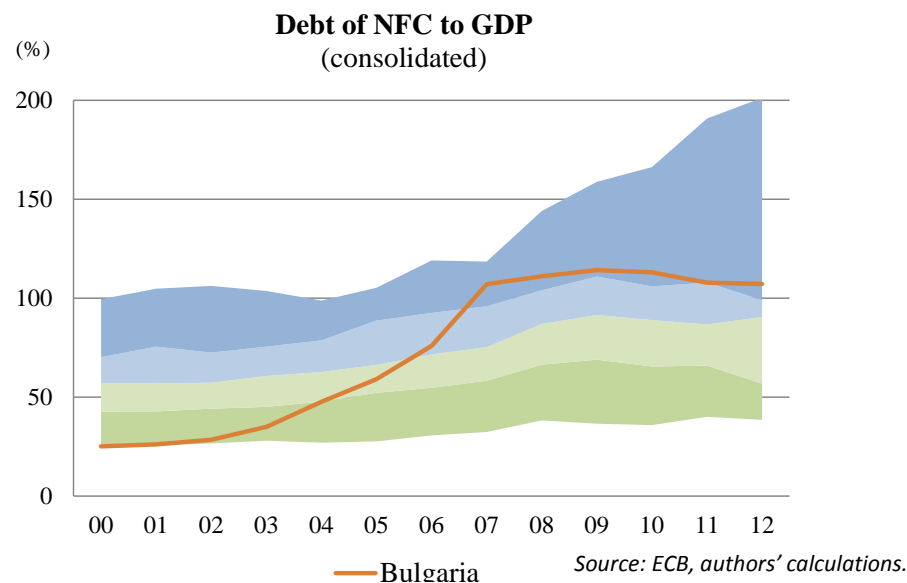
Source: ECB, authors' calculations.



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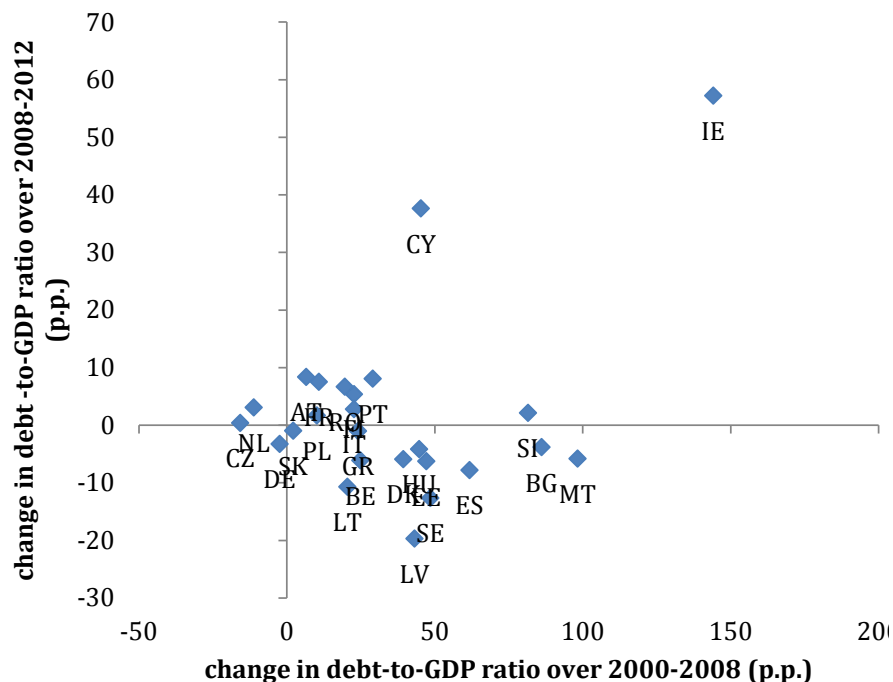
NFC indebtedness – macro level

- The accumulated change of NFC debt-to-GDP ratio over the period 2000–2008 was about 86 p.p. which was the third highest among the EU member states.
- Comparatively fast growth of NFC indebtedness in Bulgaria in the period before the global financial and economic crisis was driven by fundamental factors for the economy related to real and nominal convergence processes, high return on capital, favourable macroeconomic situation, increase in FDI inflows, deepening of financial intermediation as well as the low base.

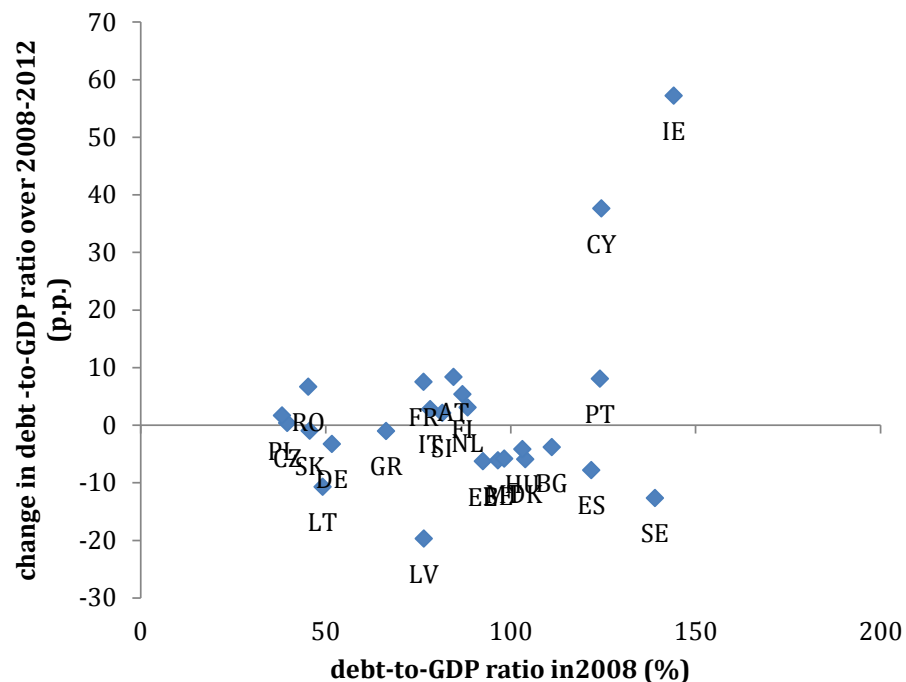


NFC indebtedness – macro level

- An analysis of the data for all EU countries does not suggest any definitive link between the change in the debt-to-GDP ratio in the period 2008-2012 and the level of indebtedness of NFC in the pre-crisis year of 2008 or to the change in the debt-to-GDP ratio over the period 2000-2008.



Source: ECB, authors' calculations.

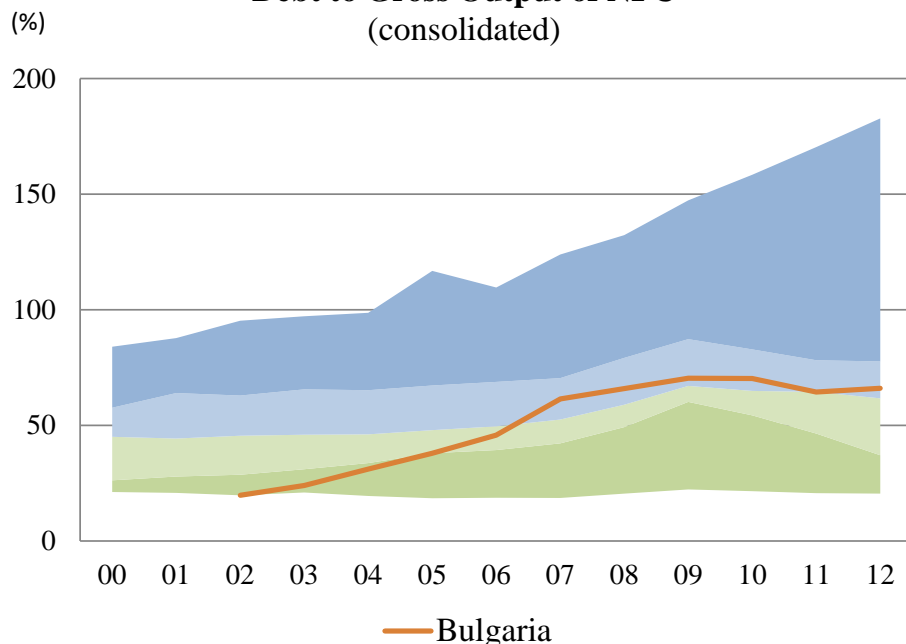


Source: ECB, authors' calculations.

NFC indebtedness – macro level

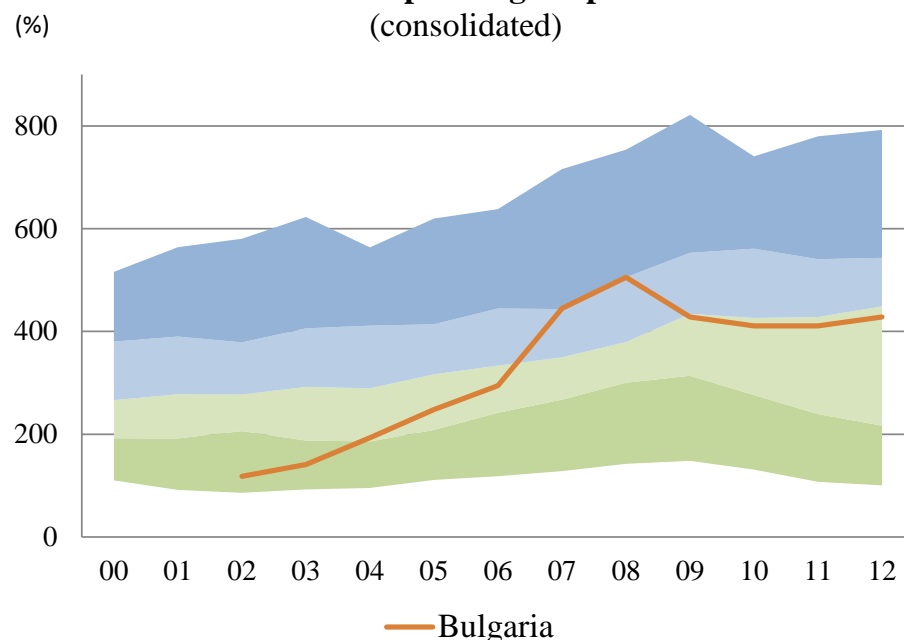
- Bulgaria stands relatively close to the average EU levels both before 2008 and after 2008 if indicators like debt-to-gross operating surplus of NFC and debt-to-gross output of NFC, which represent more relevant denominators regarding the institutional sector of NFC, are applied.

Debt to Gross Output of NFC
(consolidated)



Source: ECB, authors' calculations.

Debt to Gross Operating Surplus of NFC
(consolidated)

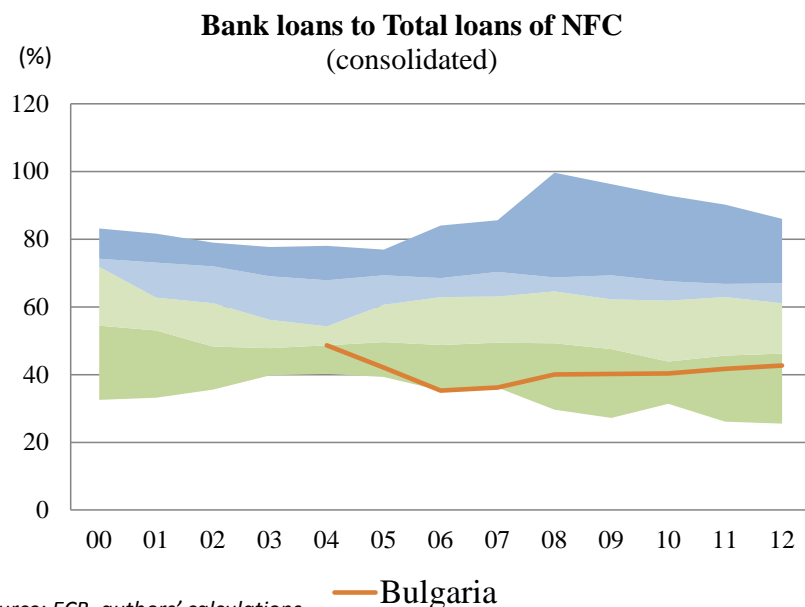


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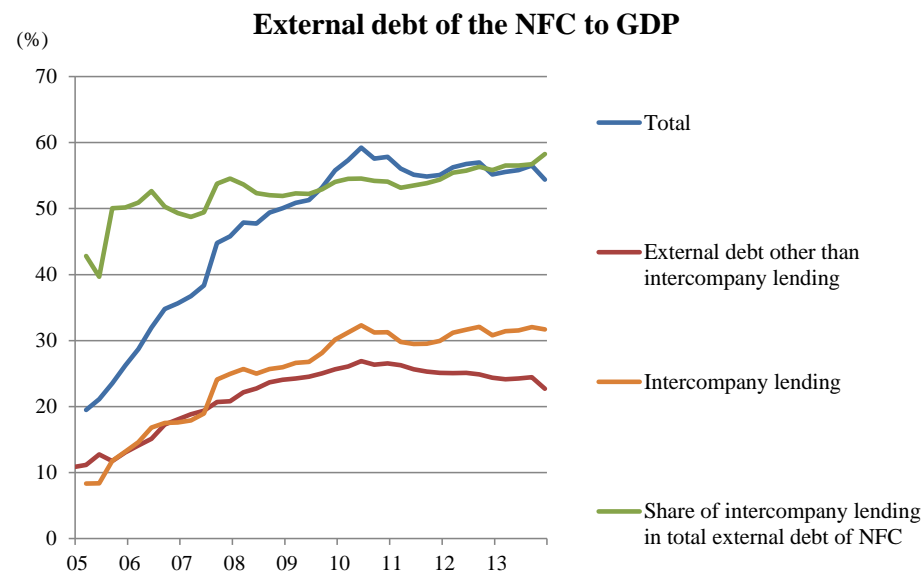
NFC indebtedness – macro level

Bank loans and external debt

- In the composition of loans liabilities of Bulgarian NFC the share of domestic bank loans is relatively small compared to other EU member states over the whole period before and after 2008.
- The cross-border financing flows have a more important role compared to domestic bank credit as a source of financing.
- Due to the high share of intercompany lending of Bulgarian corporations from foreign parent companies in their total external liabilities, we support the view that countries like Bulgaria with large FDI inflows may sustain relatively higher levels of indebtedness compared to countries with lower FDI inflows.



Source: ECB, authors' calculations.

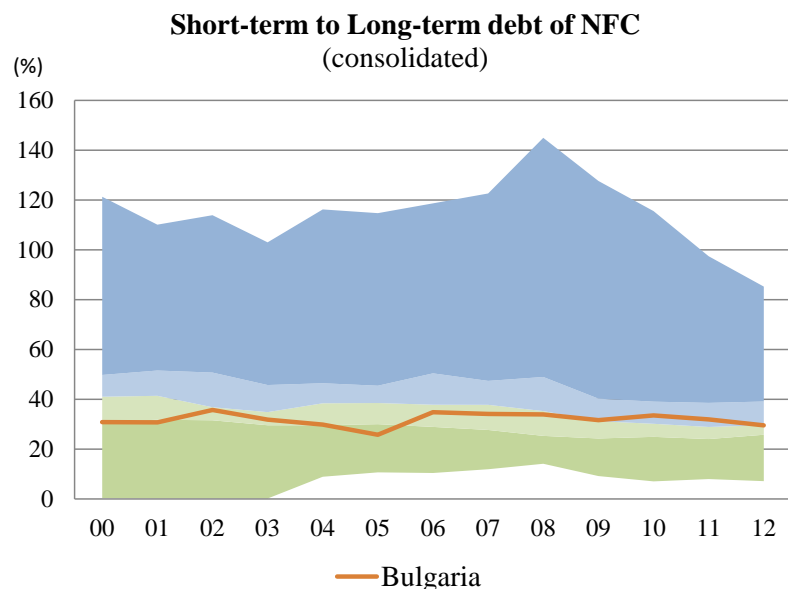


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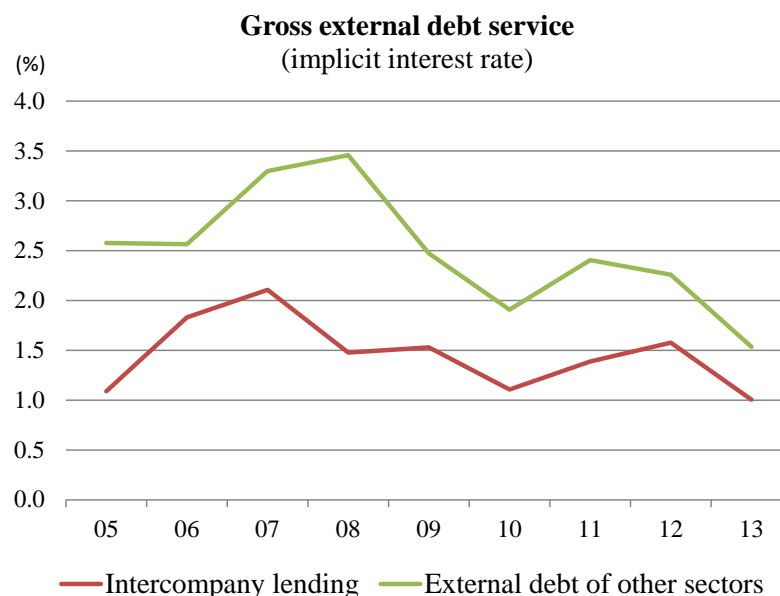
NFC indebtedness – macro level

Debt servicing

- For an assessment of the risks related to NFC debt servicing it is important to consider the maturity of the debt and interest payments.
- During both the pre-crisis period and after 2009 long-term sources of funding for NFC were dominant and this characteristic is similar to the maturity structure developments observed in the euro area countries.
- The ratio of short-term to long-term NFC debt slightly declined to below 30% as of 2012 which is an indication of reduced vulnerabilities of NFC to debt repayments.
- The same dynamics is observed in the implicit interest rate related to gross external debt service.



Source: ECB, authors' calculations.

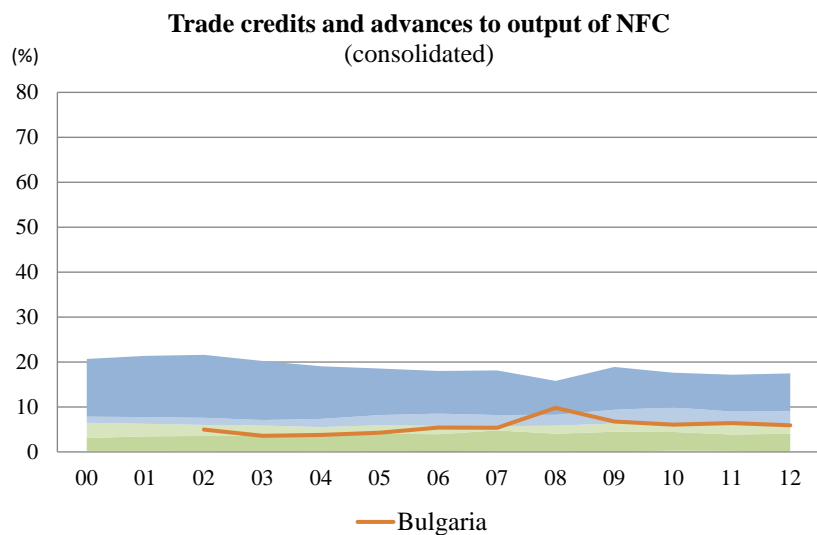


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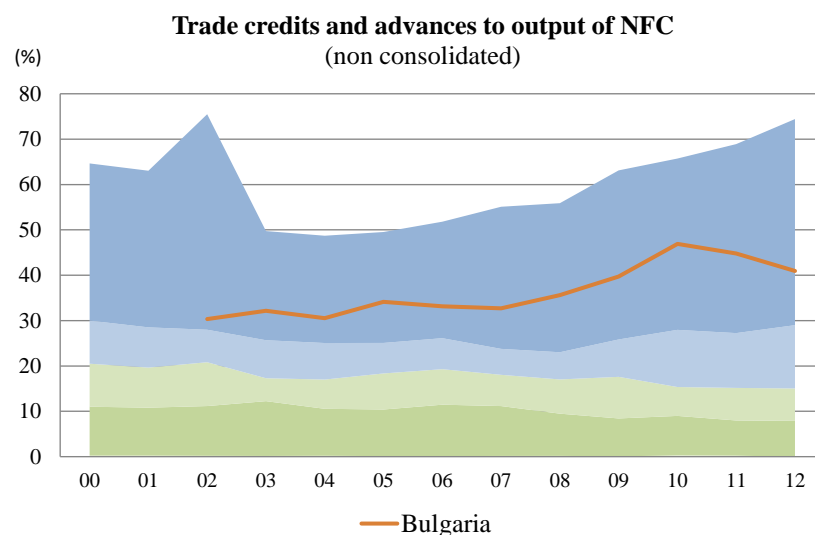
NFC indebtedness – macro level

Trade credit

- Trade credit and advances may be viewed as another important source of NFC funding.
- Over the period 2002–2012 indebtedness of Bulgarian firms related to trade credits based on non-consolidated data was relatively higher compared to the average for the EU countries. However, it has to be stressed that there may be differences in national statistical practices in recording trade credits which may produce erroneous conclusions when making comparisons across countries.



Source: ECB, authors' calculations.

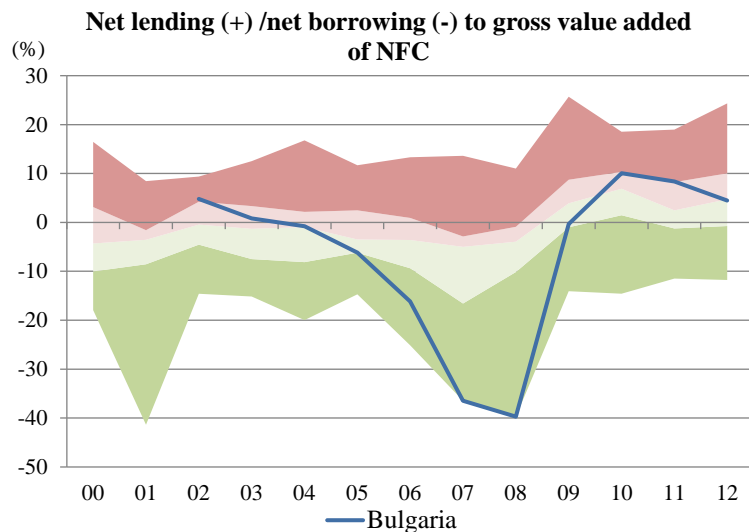


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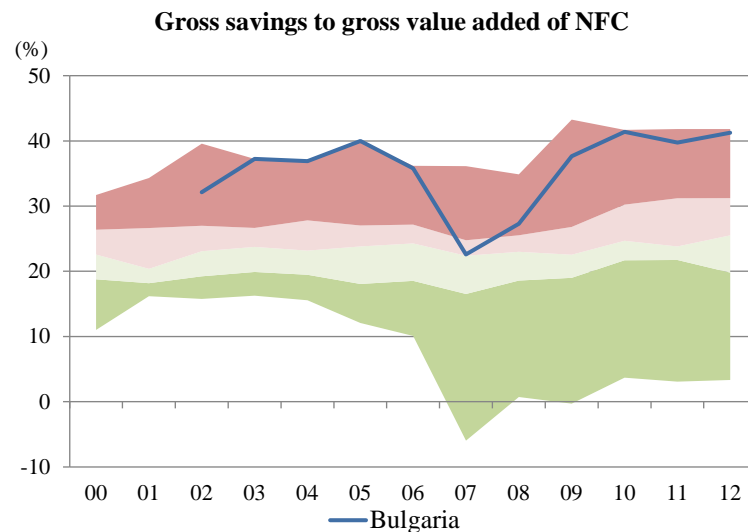
NFC indebtedness – macro level

Corporate balance sheet adjustments

- Since 2010 the decrease of the NFC leverage observed through various ratios is rather limited, which does not support the view of deleveraging pressures being experienced by Bulgarian companies.
- At the same time, the dynamics of companies' net lending/borrowing position which moved to positive levels shortly after 2008 is a sign of significant change in the NFC balance sheets compared to the previous period of high economic growth.



Source: Eurostat, authors' calculations.



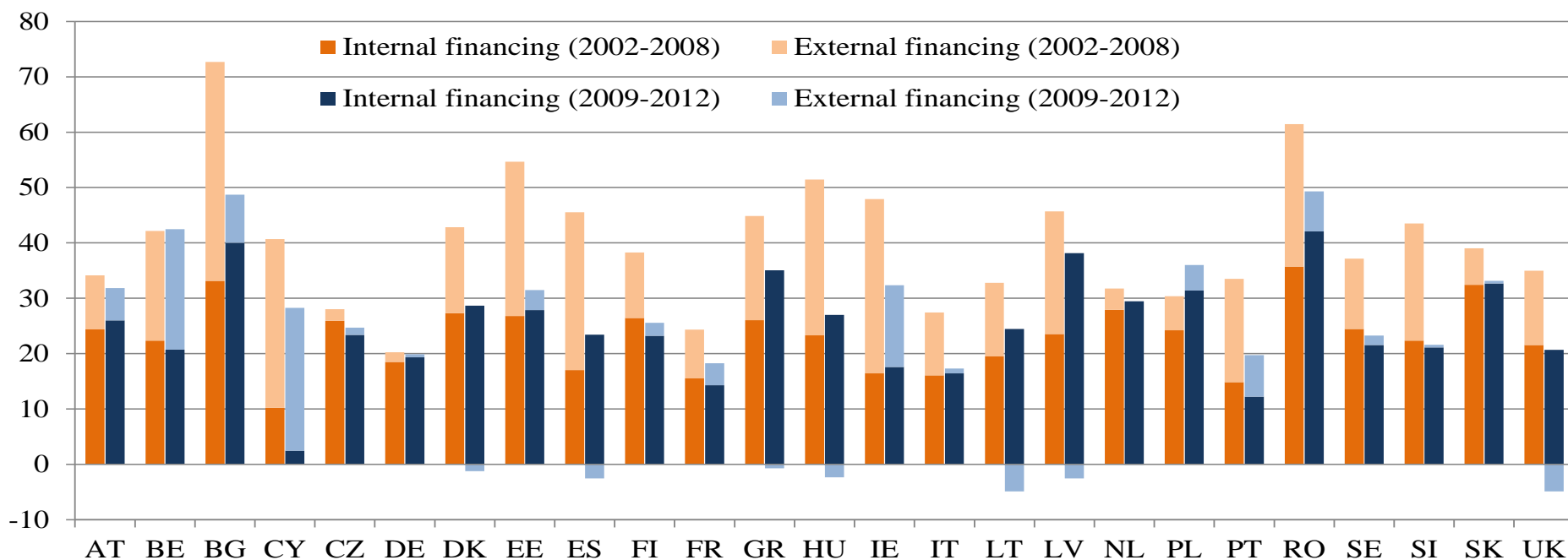
Source: Eurostat, authors' calculations.

NFC indebtedness – macro level

Internal and external financing sources

- Internal financing played an important role in total corporate funding before the crisis and even increased over the period since 2009.
- Compared to other EU countries Bulgaria is among the countries in which NFC reliance on internal funding is relatively higher.

Financing sources of NFC (% of gross value added, averages over the periods)



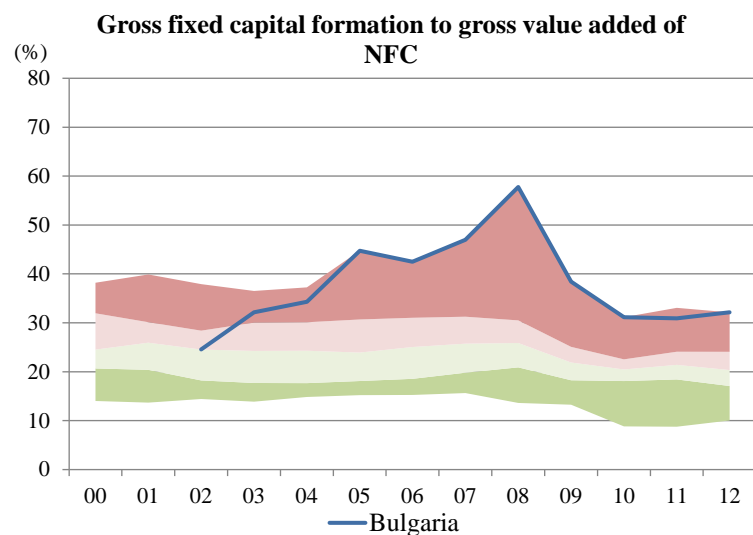
Notes: As a proxy for internal financing we use gross savings based on national sectoral accounts. The total debt of NFC comprising loans and securities other than shares is used as a proxy for external financing flows.

Source: Eurostat, ECB, authors' calculations.

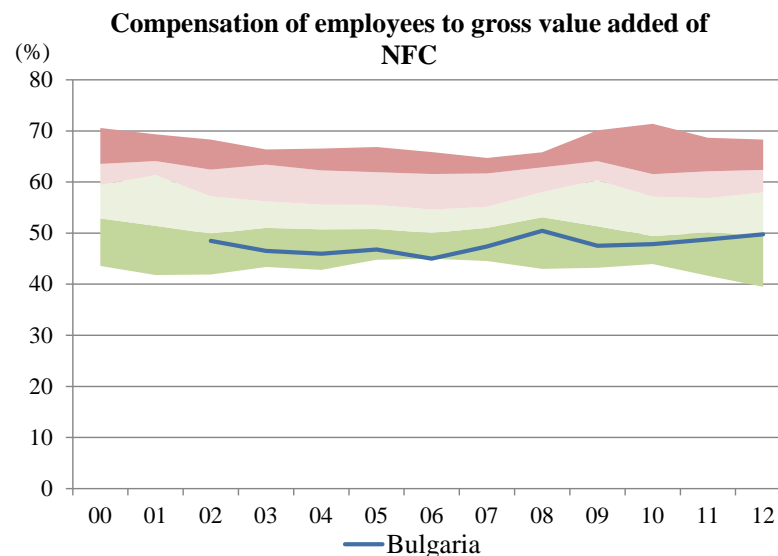
NFC indebtedness – macro level

Investment and employment

- The adjustment of NFC investment took place most substantially in 2009-2010 when overall gross fixed capital formation in the economy contracted in real terms by around 18% in both years.
- At the same time, as of 2012 when the investment rate of Bulgarian NFC was broadly unchanged at about 32% of gross value added, it still remained the highest among all EU countries measured both as a ratio to value added and to output.
- While NFC reduced their investment rate, they did not lower the share of compensation of employees in gross value added.
- In terms of employment for the overall economy, however, in the period 2009-2013 there was a reduction by about 10%, with the strongest decreases observed in the construction sector, the industry sector (excluding construction) and the agricultural sector by 40%, 20% and 11% respectively.



Source: Eurostat, authors' calculations.



Source: Eurostat, authors' calculations.

NFC indebtedness – sectoral level

- We also present an analysis of indebtedness and overall adjustment behaviour of firms by sectors of economic activity.
 - construction
 - industry excluding construction
 - services
 - agriculture
- In order to analyse the sectors' indebtedness we use the total liabilities of the NFC by sectors of economic activity . Total liabilities comprise not only loans and securities other than shares but also other accounts payable such as trade credit and advances, taxes, social contributions, wages and salaries, rents, guaranties etc.

NFC indebtedness – sectoral level

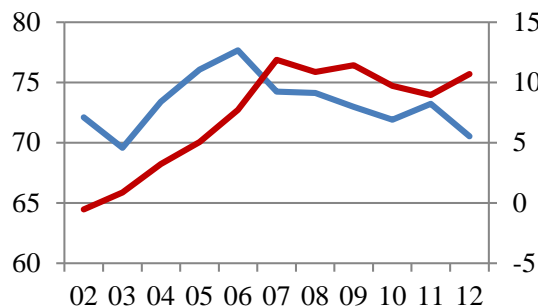
Construction

- Since 2009 the construction sector has undergone significant adjustment.
- The construction sector is characterised by relatively higher indebtedness and higher share of short-term debt compared to the other sectors both before and after the crisis. The average ratio of liabilities to assets was about 74% over the period 2002–2008, however a moderate downward trend in indebtedness is observed starting from 2007 and continuing until 2012.
- The evidence whether the relatively high indebtedness of the construction sector is the main factor behind its observed prolonged contraction is not clear-cut as subdued demand also influences developments in the sector.

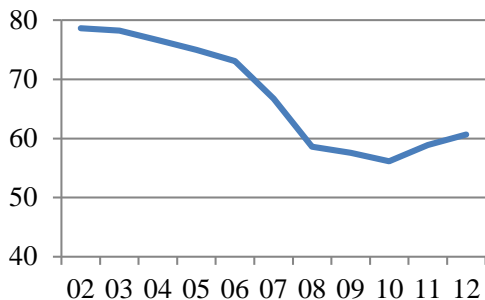
NFC indebtedness – sectoral level

Construction

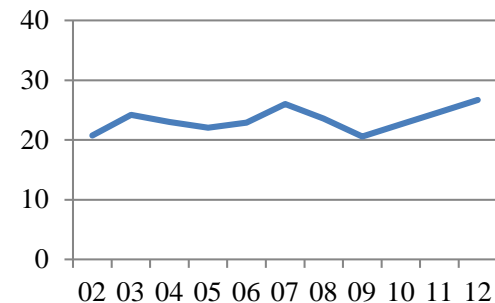
— Total Liabilities to Assets Ratio (% , lhs)
— ROA (% , rhs)



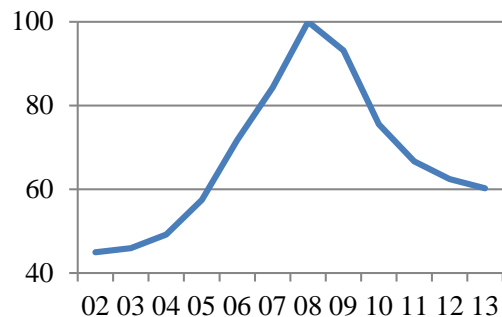
— Short-term to Total Liabilities (%)



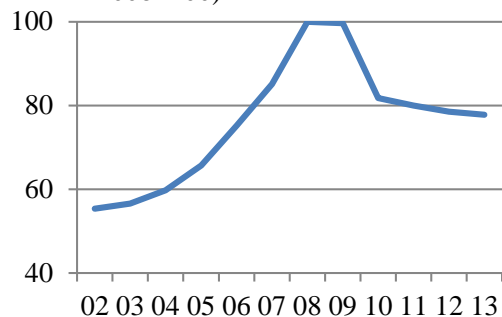
— Cash Ratio (Cash & Equivalents to Current Liabilities) (%)



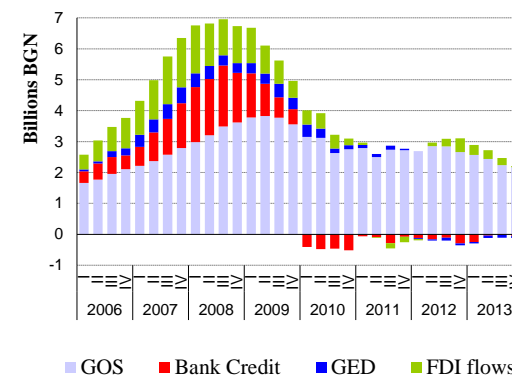
— Employment (2008=100)



— Gross value added (constant prices, 2008=100)



Financing sources in construction



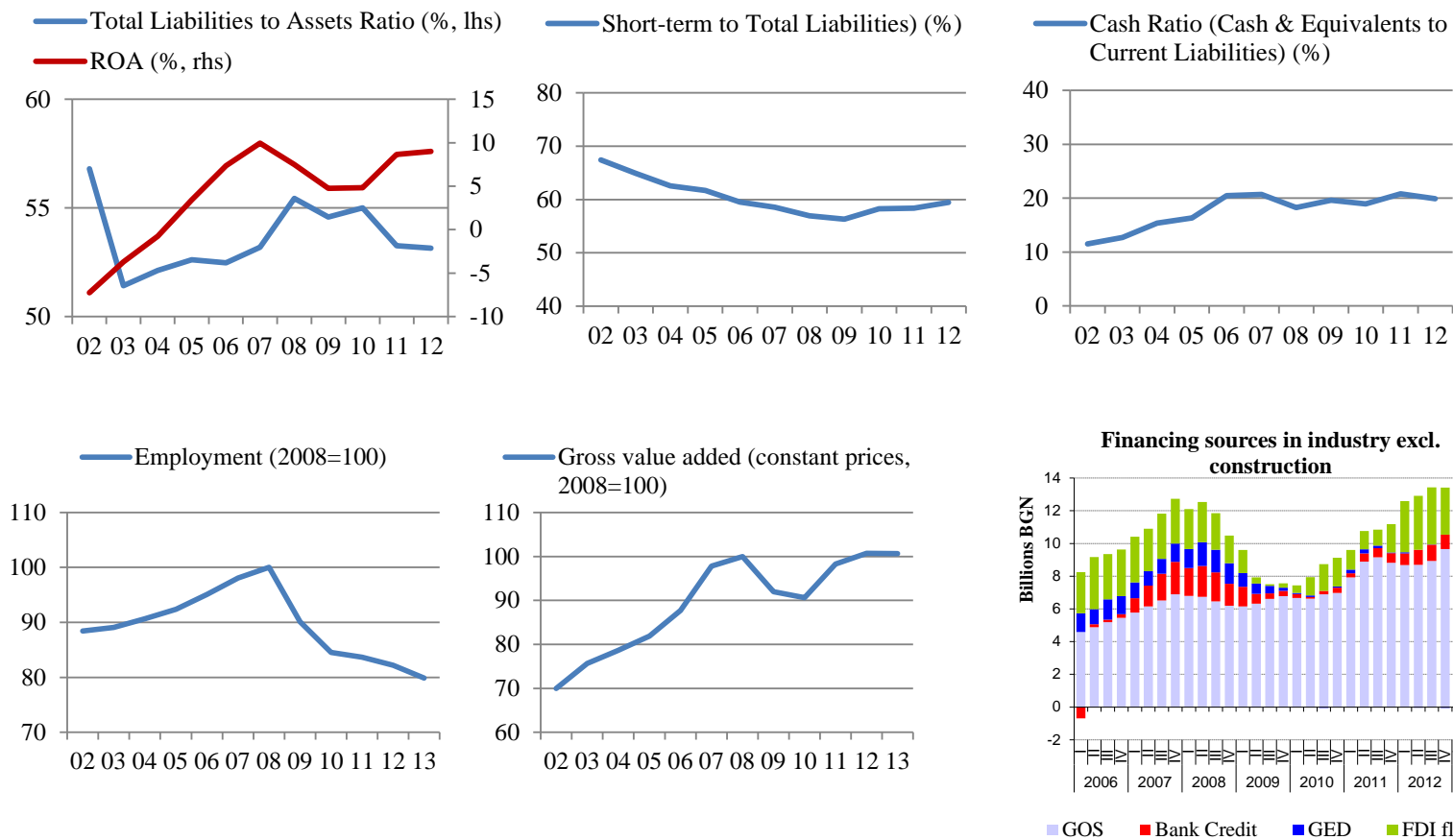
NFC indebtedness – sectoral level

Industry excluding construction

- The adjustment in the industry sector excluding construction was less severe compared to that in the construction sector.
- The leverage of the sector is lower compared to construction and services. Since 2009 the leverage remained broadly unchanged up to 2011, when some slight downward adjustment took place.
- The empirical evidence does not point to deleveraging pressures experienced by the industry sector excluding construction.

NFC indebtedness – sectoral level

Industry excluding construction



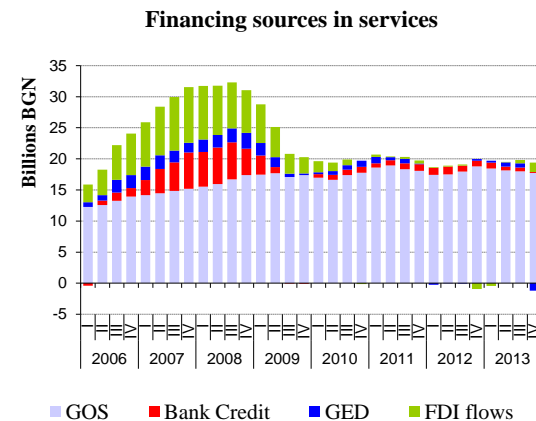
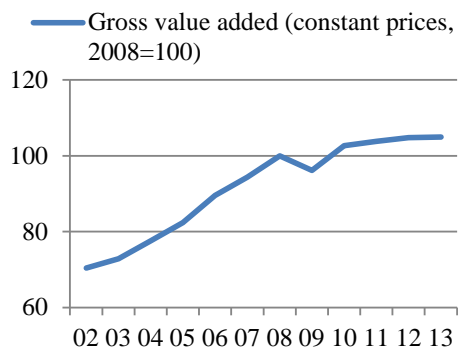
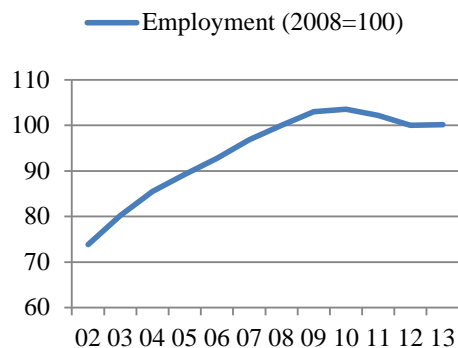
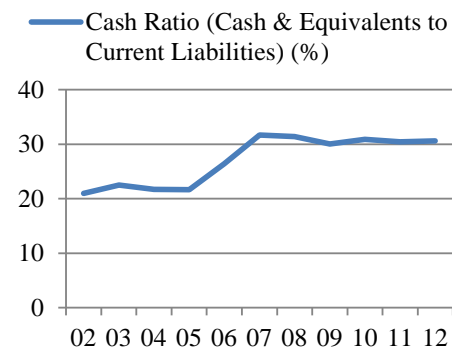
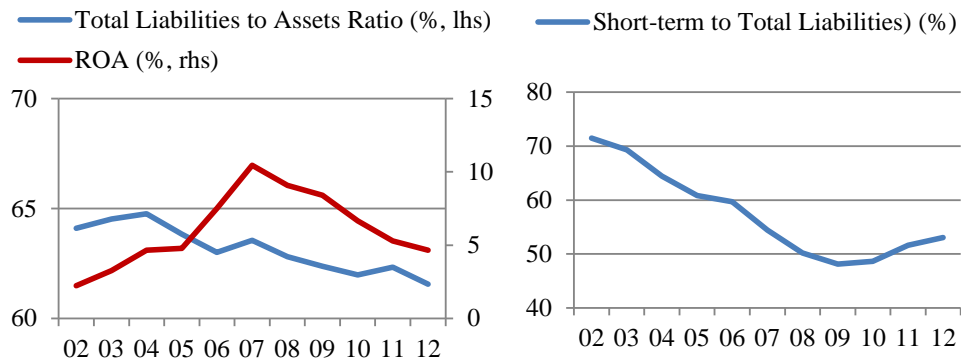
NFC indebtedness – sectoral level

Services

- In contrast to the construction and the industry sector excluding construction, the value added of the services sector followed an increasing trend throughout the crisis and employment did not suffer any significant losses for the overall sector.
- The leverage ratio of the NFC in this sector has followed a clear downward trend since 2004 and this trend continues during the crisis period, however with relatively modest downward adjustments in the period from 2009 to 2012.
- The adjustment process in the services sector appears to have had a significant negative impact only on corporate profits of the sector, however with no apparent evidence of negative effects of deleveraging pressures.

NFC indebtedness – sectoral level

Services



Conclusions contd.

- At present, there is no significant evidence that the deleveraging process has strong negative effects on corporates' business activity as companies preserve high liquidity ratios and restructure their expenditures in order to maintain sound finances.
- At a macro level, the beginning of the deleveraging process can be dated around 2010, with a relatively more significant reduction of indebtedness of non-financial enterprises occurring in 2011.
- In the period 2009-2012 internal financing has increased its importance for firms and firms' gross savings have retained a level close to that observed from 2002 to 2006.

Conclusions

- Our findings point to certain differences of NFC debt adjustment and overall behaviour across sectors of economic activity.
- The global crisis had a significant negative effect in terms of value added and employment on the construction and industry excluding construction sectors.
- Overall, there is evidence of smooth deleveraging at a sectoral level and in some sectors this seems to be driven by long-term processes which began prior to the start of the global financial and economic crisis.
- In most of the sectors the observed moderate deleveraging processes during the crisis do not seem to be the main factor behind economic activity and employment developments
- Finally, due to the remaining high uncertainty both in the external and internal environment, at this stage it is also very difficult to give a definitive answer to the question whether corporate deleveraging has run its course in Bulgaria, even though at a macro level the 2012 data give some indication in this direction.

Thank you for your attention!