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Does macro-policy regime change bring about change in microeconomic behaviour? Access to bank finance and enterprise investment in Bulgaria before and after the introduction of a currency board

Non-technical summary

Bulgaria's difficult transition from plan to market was marked by persistent macroeconomic and financial instability leading to a major economic collapse in 1996-1997. In 1997 a currency board arrangement (CBA) was established as a "policy of last resort" with the aim to impose fiscal and financial discipline. This amounted to a major policy regime change, in fact, the most important policy shift during the whole transition period.

It has been widely acknowledged that Bulgaria's macroeconomic performance has changed dramatically since 1997. Macroeconomic and financial stability have been restored and economic activity started to recover; inflation was brought down to single-digit numbers, real incomes have been rising and the chronic fiscal gap has been closed. However, so far there has been relatively little research on how this policy regime change has affected microeconomic behavior and the relations between enterprises and banks, and whether it has helped to impose hard micro-budget constraints in the corporate sector. This research project addresses some of the microeconomic implications of the macro-policy regime change in Bulgaria, focusing on two main aspects: 1) the flows of bank credit to the enterprise sector and 2) the investment behavior and performance of Bulgarian firms.

With respect to *corporate credit*, we seek to identify the changes in enterprise-bank relations and their motivation, and try to explain the transmission channels through which the changes in the macro policy regime are being transmitted to the micro level. The main focus of our research is on a statistical analysis of the determinants of corporate credit in Bulgaria's transitional environment. We use some theoretical models and results from the recent literature to formulate and specify equations reflecting the motivation behind lending and borrowing decisions. These equations are estimated econometrically using firm level data for Bulgarian firms for the period 1995-1999.

There are two distinctly different sides to corporate credit – lenders and borrowers – and each of the sides has specific motivation to engage in this process. We address separately these two sides of bank-enterprise relations by estimating separately credit supply

and credit demand equations for the years of this period of turbulent change. The estimated equations enable us to identify behavioral changes related to corporate finance that have taken place in banks and in firms and to highlight the motivation and driving forces behind these changes.

The estimated credit supply equations provide clear evidence of a change in banks' lending practices over the period 1995-1999. Overall we find some evidence of distorted incentives and perverse lending patterns in the first years and considerably less signs of such patterns in the last years of this period. In the two years after the policy reform the lending practices of Bulgarian banks appear to be more or less in conformity with the theoretical expectations for normal banking practices in market conditions.

Our empirical results suggest that banks have a revealed preference to lend to firms with long-term enterprise-bank relations, to large firms and to exporting firms while profitability does not seem to be an important determinant of bank lending. At the same time these results provide strong evidence of a credit crunch after the introduction of the CBA with banks becoming more reluctant to lend to the corporate sector. In addition, one can observe a shift in their lending preferences as they appear to be more likely to lend to private firms rather than to SOEs (which used to be the preferred borrowers in the past). We also find evidence of a change in bank lending toward better credit screening: firms with a record of financial indiscipline were less likely to get access to bank credit in the end of the period while the role of collateral in securing firm's access to bank credit increased. These results suggest an increased role of the payment discipline in shaping bank lending decisions.

The estimated equations for credit demand are generally in conformity with the priors derived from theory. Our results provide evidence that habit persistence and changes in the level of economic activity within the firms were among the important determinants of credit demand of Bulgarian firms; liquidity constraints and indebtedness also played a role in shaping credit demand. The results also point to a segmentation of the market of corporate borrowers in Bulgaria which is consistent with the notion of a heterogeneous response to monetary shocks conjectured by the credit channel hypothesis. Thus, for example, there are discernible distinctions in the patterns of credit demand in large firms. In addition, the category of SOEs displays markedly different borrowing patterns compared to any category of private firms. Some of these patterns suggest that SOEs continue to be featured by distorted incentives as market forces to not seem to play a leading role in motivating their borrowing decisions.

An important general finding is that the changes in corporate credit in this period were mostly driven by the supply side and were caused by the changes in the motivation and in the patterns of bank lending which, in turn, were triggered by the policy reform. Consistent with the "bank lending channel" view, we find evidence of systemic shifts and changes in the slope of the credit supply schedule in the years following the introduction of the CBA. By contrast, we find little evidence of major systemic changes in the patterns of the firms' credit demand.

With respect to firms' *investment behavior,* we develop an analytical approach that takes into account the specificity of the transitional environment and apply it empirically for studying the determinants of investment in Bulgarian firms. In particular, we focus on the various specific financing constraints that transition firms face and their implications for the firms' investment decisions. The fact that many transition firms operate under soft budget constraints (SBC) is an important factor that should be taken into account when considering the importance of financing constraints in general on firm investment. We use for this purpose a version of the accelerator model of investment, augmented with variables to assess the importance of financing constraints on investment decisions. To take into account the heterogeneity of the sample and of the importance of transition-specific factors (such as the access to bank finance incidence of soft budget constraints) we divide the sample into subgroups and estimate the equation for each of these groups of firms.

The estimation results indicate that the only category of firms that face genuine financing constraints in their investment decisions are the firms with no access to commercial credit that are subject to hard budget constraints (HBC). These results provide strong evidence that the incidence of SBC is an important factor that affects the investment decisions of the firms. While SBC can also be regarded as a substitute for other types of external, they have a highly distorting effect on firms' incentives, in particular, on investment behavior, generally eroding the efficiency of resource allocation. However, our results also indicate that the importance of the transition-specific financing constraints weakens somewhat towards the end of the estimation period, after the policy regime change.

Our results also suggest that access to bank credit is also an important determinant of investment decisions and firms with access to such funds feature a distinctly different pattern of investment behavior. In this case again the nature of the budget constraints faced by the firms clearly affects the firms' decisions. Firms facing HBC are more likely to be financially constrained than firms facing SBC; besides dynamic adjustment seems to play a more important role in the first category of firms.