COLLATERAL SIZE IN SMES FINANCING: WHICH FACTORS MATTER MORE?

Daniel Badulescu – Ramona Simut – Florin Filip

Abstract
Collateral’s importance in understanding the (limited) access of SMEs to adequate funding is an essential issue, both theoretical and practical. For lenders, collateral’s benefits refer to diminishing agency costs and informational asymmetries, limiting the potential legal complaints and shaping the debtors' future behavior. For SMEs, the insufficient collaterals are probably the most claimed cause of the difficulties in accessing a credit, and a clear way to evaluate the depth and severity of financial gap. Starting from our previous studies concerning the role of collateral in relationship lending, we extended the research to determine the banks’ perspective and found out that the most effective variables determining the bank’s perspective on the collaterals required in loan contracts are the length of the banking relationship and the prompt repayments. On the other side, the trust in managers/owners of the companies has little influence on the collaterals required in loan contracts. The results are similar to our prior researches showing that companies with long-term relationship with a bank are available to provide more guarantees than those firms that count on trust relationship. Our findings, in line with other researches, allow us to conclude on the importance of the banks’ role in SMEs financing.

Key words: SMEs, lending relationship, banks’ behaviour, collateral

JEL codes: G21, G32, O16

Introduction
Small businesses face a lot of obstacles and difficulties, mainly due to their smaller size and limited capacity to negotiate with different partners from their environment. Unfortunately, SMEs face additional challenges during the difficult times of the recent financial crisis, difficulties affecting the process of new ventures creation, but also of the growth and even survival of the existing ones. The first entities (and the most!) affected by the recession were
SMEs (Beck, Degryse, De Haas, & van Horen, 2014) and “despite showing more resilience in the initial stage of the crisis, the SMEs are now trailing behind large companies in the recovery” (European Commission, 2013, p. 7). However, Europe's economic success depends to a large extent of this sector. SMEs account for over 99% of all enterprises in EU, providing more than 80% of all new jobs, employing about 67% of private sector employees and have a gross added value of around 58% (Lopez de Silanes Molina, McCahery, Schoenmaker, & Stanisic, 2015), (Rangone, 2016). Even the SMEs’ contribution is important for EU states, their financing opportunities are quite low compared with the large enterprises.

Fortunately, there are solutions that could be put into practice to improve SMEs access to finance. One solution has been (and still is) the European financing programs devoted to SMEs. The second solution resides in the "classic" sources of external financing. However, small companies are not as transparent and stable as large enterprises, making almost impossible for SMEs to attract funds directly from investors or from the capital markets. The external financing of SMEs is mainly bank-based, through credit lines (or overdraft) and bank loans (European Commission, 2015, pp. 7-11). In order to benefit from external financing, small companies face two important constraints, i.e. interest rates and collateral requirements. Regarding the collateral requirements, the EU reports recorded an increase during 2009-2013, followed by a slight decrease. For Central and Eastern Europe (CEE), the perceptions vary: 27% of Bulgarian SMEs’ representatives see an increasing of collateral requirements, meanwhile in Hungary, Slovakia and the Czech Republic the figures are considerable lower (11-12%). Nevertheless, in CEE the percentage of those who consider that the collateral requirements are quite low: from 4% in Romania and Slovakia, to a maximum of 7% in Czech Republic. Overall, 15% of the surveyed SMEs consider that collateral is the most difficult creditors’ requirement. The percentage ranges from 28%-24% in Hungary and Romania, to 15% in Czech Republic and Slovakia (European Commission, 2015).

1 The literature on collateral and its effects in the lending relationship
The existence of collateral is important to reduce agency costs, prevent the assets substitution and mitigate the under-investment problems (Jensen & Meckling, 1976), (Steijvers, et al., 2010), to reduce the information asymmetry between borrower and lender, to obtain lower interest rates or a greater availability to funding from the banks (Bester, 1985), (Besanko & Thakor, 1987).
Banks want to retain such a right (privilege) on the debtor’s property, unaffected by excessive demands coming from unsecured creditors, such as suppliers or state budget. Under perfect information conditions, the subsequent un-secured creditors will either decline the funding, or require higher interest rates (Steijvers, et al., 2010). The existence of the collateral signals the debtor’ stance towards, and among, the lenders. According to Bester (1985), Besanko & Thakor (1987), the borrowers with low risk bring more or most valuable guarantees than high risk borrowers, indicating a confidence in their performance and the proposed project. This opinion is questioned by Chen (2006) and Inderst & Mueller (2007), who consider that the existence of consistent collateral could generate the adverse selection phenomenon. Finally, the collateral is considered as an element to temper the future excessive borrowing. The existence of substantial guarantees endorsed in favour of the existing bank will deter other bank from getting involved on underprivileged positions.

Overall, collateral acts to discipline the ex post borrowers’ behaviour, to mitigate the moral hazard problem once the loan was granted, to align the interests of lenders and borrowers, and thus avoiding the situation when the borrower makes no effort to ensure the success of the financed project (Aghion & Bolton, 1992). Jiménez et al (2006) consider that these over-demands for guarantees adversely affect the efficiency of credit markets and diminish social welfare, being rejected good projects that cannot be backed with guarantees.

A long credit relationship decreases collateral requirements (Boot & Thakor, 1994) and lower the interest rate (Berger & Udell, 1995). The combination of good quality of the debtor and valuable guarantees could reduce the loan interest margin and collateral requirements (Bharath, et al., 2011), and also reduce the intense monitoring from lending institutions (Holmstrom & Tirole, 1997). Degryse and van Cayseele (2000) find that the duration of the relationship negatively affects the probability of posting collateral, while purchasing other services reveals an increase in the probability of pledging collateral. According to Hernandez-Canovas & Martinez-Solano (2010), in the last decades there is an increase in the availability of the lenders to get involved in firms’ in new projects, but instead they claim more control in SMEs’ activity and the best collaterals.

2 Data, methodology and results
In order to investigate the nature and importance of the influence of the banking relationship on collateral required, considered from the bank’s perspective, we developed a survey-based research among 150 banks representatives (i.e. bank managers, SMEs risk managers and SMEs relationship managers), from different banks in Romania. The survey was developed based on a questionnaire with 18 questions. Most of the respondents (i.e. 85%) were employed in the North-Western Region of Romania, and the rest (i.e. 15%) in the Centre Region and Western Region. As a result of the survey, the primary dataset consisted of 67 responses from managers working in 20 banks (out of 42). After removing the errors, 64 questionnaires were taken in analysis. When checking the national representativeness of the responses, we found no special features, different economic laws or regulations for this area, or special behaviours or practices coming from the banks related to SMEs in specific Romanian regions (National Bank of Romania, 2014).

In Table 1 we present the endogenous and exogenous variables analysed and their descriptions.

**Tab. 1: Definition of endogenous and exogenous variables**

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Explanation of variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endogenous variables</strong></td>
<td></td>
</tr>
<tr>
<td>Collateral</td>
<td>On a scale from 1 (totally disagree) to 5 (totally agree), we denote bank’s opinion on the following statement: “The banks grant loans only if the company provides collateral”. Dummy variable Collateral takes value 1 when response exceeds median and 0 otherwise</td>
</tr>
<tr>
<td><strong>Exogenous variables</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Bank characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>On a scale from 1 (totally disagree) to 5 (totally agree), we denote bank’s opinion on the following statement: “In Romania, the small banks have a higher availability to finance SMEs compared to the large banks”. Dummy variable Size takes value 1 when response exceeds median and 0 otherwise</td>
</tr>
<tr>
<td>Nature and origin of the capital</td>
<td>On a scale from 1 (totally disagree) to 5 (totally agree), we denote the bank’s opinion on the following statement: “In Romania, domestic banks have higher availability in SME financing in comparison with the foreign banks”. This dummy variable takes value 1 when response exceeds median and 0 otherwise</td>
</tr>
<tr>
<td><strong>Relationship characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>On a scale from 1 (totally disagree) to 5 (totally agree), we denote the bank’s opinion on the following statement: “For the companies that work primarily with a bank for extended</td>
</tr>
</tbody>
</table>
We analysed the effect of the main determinants of the relationship between banks and SMEs, and then tested the effect of certain general characteristics (i.e. size, nature and origin of the capital), relational characteristics (i.e. length and trust) and specific financial indicators concerning lending (i.e. discount for early payment and renewal) on the bank’s perspective about the collaterals required in loan contracts. Specifically, banks representatives were asked to rate on a scale from 1 (never) to 5 (always) the following statement: "The banks grant loans only if the company provides collateral". From the registered responses, we define the dummy variable Collateral, which takes the value 1 when the response exceeds median, and 0 otherwise. The effect of the bank relationship on Collateral is analysed through the following model:

\[
\text{Collateral} = c(1) + c(2) \cdot \text{Trust} + c(3) \cdot \text{Discount for early payment} + c(4) \cdot \text{Length} + c(5) \cdot \text{Renewal} + c(6) \cdot \text{Nature and origin of the capital} + c(7) \cdot \text{Size} + \varepsilon
\]  

(1)
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The regression determined in Table 2 contains the estimation of the model by ordinary least squared method (1). Concerning the characteristics, of the banks we can notice that the variable length has a significant impact on collateral, while trust exerts no impact on the dependent variable collateral. The probability of collaterals required in loan contracts decreases by 1.73% when the variable length increases by 10%, while a decrease by 10% in the variable trust increases the probability of collateral by only 0.57%, almost three times less. In other words, in the case of the companies which have been working with a bank for a long period of time, the bank will reduce the collateral requirements regarding the new granted loans or the renewal of the existing ones. On the other side, the trust in managers/owners of the companies has little influence on the collaterals required in loan contracts. Therefore, we can state that when it comes to reducing the collateral requirements regarding the new granted loans or the renewal of the existing ones, the bank considers that the length of the relationship is more important than the trust.

Tab. 2: The effects of bank relationship, bank characteristics and financing characteristics on bank’s perspective about the collaterals required in loan contracts (Collateral)

<table>
<thead>
<tr>
<th>Collateral (dependent variable)</th>
<th>coefficient</th>
<th>t-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.550800</td>
<td>(3.079209)***</td>
</tr>
<tr>
<td><strong>Relationship characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>-0.173013</td>
<td>(-1.712869)*</td>
</tr>
<tr>
<td>Trust</td>
<td>-0.057756</td>
<td>(-0.476758)</td>
</tr>
<tr>
<td><strong>Bank characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.156993</td>
<td>(1.288331)</td>
</tr>
<tr>
<td>Nature and origin of the capital</td>
<td>0.179338</td>
<td>(1.703410)*</td>
</tr>
<tr>
<td><strong>Financing characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prompt repayment</td>
<td>-0.333834</td>
<td>(-2.856643)***</td>
</tr>
<tr>
<td>Renewal</td>
<td>-0.236145</td>
<td>(-2.211201)***</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.189138</td>
<td></td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.005633</td>
<td></td>
</tr>
<tr>
<td>White (prob)</td>
<td>0.702235 (Prob=0.8066)</td>
<td></td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>2.302061 (d1= and d2= )</td>
<td></td>
</tr>
<tr>
<td>Jarque Bera (prob)</td>
<td>4.808709 (Prob=0.090324)</td>
<td></td>
</tr>
</tbody>
</table>
Description of all variables reported in Table 1. Observations is number of cases included in estimation. F is p-value of global test of significance of linear model. Adjusted R² is the adjusted coefficient of determination (measures goodness of fit of linear model). T-statistic in parentheses. *, **, *** Significant at the 10%, 5%, 1% level
Source: authors’ calculations

Regarding the bank’s characteristics, we find a positive coefficient for the size, nature and the origin of the capital variables. In the case of the variable nature and the origin of the capital, we find a significant coefficient at a level of 10%, and an insignificant coefficient for the variable size. We can conclude that the nature and the origin of the capital have influence on the bank’s perspective about the collaterals required in loan contracts, while the size of the bank does not. Moreover, when the bank’s size increases by 10%, the probability of posting collateral increases by 1.56%. The prompt repayment and the renewal are the other two variables influencing the collateral requirements. The impact of both financing characteristics has similar magnitude, and in the same (negative) direction. Both variables have a significant influence on the dependent variable for 1% level. On-time (or in advance) credit repayments determine less guarantee requirements on the bank side, including granting new loans or renewing the existing ones. Furthermore, banks consider that prompt repayment is the most important factor influencing the collateral of an existing credit. The probability of collaterals required in loan contracts decreases by 3.33% when the variable prompt repayment increases by 10%.

Conclusion
We have investigated the effect of banking relationship indicators (i.e. length, size, trust and the nature of bank’s capital) on the collateral required in loan contracts, based on a survey among bank representatives. We found out that the most effective variables determining banks’ requirement on loan collaterals is the length of relationship (an inverse correlation) followed by prompt repayment and the renewal, meanwhile the variable trust in managers/owners of the companies have little influence on the collaterals requirements. Regarding the bank’s characteristics, the nature and the origin of the capital influence the bank’s perspective, but the size of the bank does not significant influence this collateral requirements. In our previous research (Badulescu, et al., 2014), but addressed to SMEs, we found also that the collateral required in loan contracts depends mainly on the length of the banking relationship, meanwhile the bank’s characteristics (age and size) have exerted a medium influence on collateral sizing. Reviewing all our research on banking relationships, we find that, so far, this is the only
similarity between the banks’ opinion and SMEs: the length of banking relationships exerts a significant relationship on collateral sizing in loan contracts. Moreover, our present findings confirms most of the literature and gives the possibility of substantiating and targeting efforts to improve the effective banks’ involvement in fulfilling SMEs financing needs.

References


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