A more complete conceptual framework for SME finance

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汇报日期：2019年10月13日

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Introduction

1 Introduction

- The availability of external finance for small and medium enterprises (SMEs) is a topic of significant research interest to academics and an important issue to policy makers around the globe.

- However, we argue that the current framework is oversimplified,and neglects key elements of the financial system that affect SME credit availability. An important oversimplification in the current framework is the way that lending technologies are often categorized into two types: transactions lending that is based primarily on ‘‘hard’’ quantitative data and relationship lending, which is based significantly “soft” qualitative information.

- Under this categorization, transactions lending is generally viewed as being focused on informationally transparent borrowers, while relationship lending is seen as used for opaque borrowers.

1 Introduction

- In our view, this characterization is fundamentally flawed. Transactions lending is not a single homogeneous lending technology. There are a number of distinct transactions technologies used by financial institutions, including financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, and leasing.
- Our framework specifies a causal chain from government policies to a nation’s financial institution structure and lending infrastructure.
- A common finding is that large institutions have a comparative advantage in transactions lending to SMEs based on hard information, while small institutions have a comparative advantage in relationship lending based on soft information.

1 Introduction

- The inference that large institutions are disadvantaged in lending to opaque SMEs is flawed.
- Research on SME finance suffers from the problem that the lending technologies are usually not identified. This makes it difficult to test theories that relate financial structures to credit availability for different types of borrowers and to make policy assessments of which financial structures function best in supplying funds to creditworthy transparent and opaque SMEs.
- The effects of a nation’s lending infrastructure on SME credit availability through determining the feasibility and profitability of deploying the different lending technologies is particularly under-researched in the literature. This infrastructure includes the information environment, the legal, judicial, and bankruptcy environments, the social environment, and the tax and regulatory environments in which financial institutions operate in a given nation.

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Lending technologies

2 Lending technologies

- Each technology is distinguished by a unique combination of the primary source of information, screening and underwriting policies/procedures, structure of the loan contracts, and monitoring strategies and mechanisms.

2.1 Financial statement lending

- Financial statement lending is a transactions technology based primarily on the strength of a borrower’s financial statements.
- There are two requirements for this technology that depend on hard information.

First, the borrower must have informative financial statements, such as audited statements prepared by a reputable accounting firm according to widely accepted accounting standards such as GAAP.

Second, the borrower must have a strong financial condition as reflected in the financial ratios calculated from these statements.

- Financial statement lending is reserved for relatively informationally transparent firms.

2.2 Small business credit scoring

- Small business credit scoring is a transactions technology based primarily on hard information about the SME's owner as well as the firm.
- The owner information is primarily personal consumer data obtained from consumer credit bureaus. This is combined with data on the SME collected by the financial institution and often from commercial credit bureaus.
- This technology may be applied to very opaque SMEs, given that much of the information is based on the personal history of the owner, rather than the SME.

2.3 Asset-based lending

- Asset-based lending is a transactions lending technology in which financial institutions address the opacity problem by focusing on a subset of the firm's assets, which are pledged as collateral, as the primary source of repayment.
- This technology provides working capital financing secured primarily by accounts receivable and inventory.
- Under asset-based lending, the extension of credit is primarily based on the value of the collateral, rather than the overall creditworthiness of the firm.

2.4 Factoring

- Factoring only involves the financing of accounts receivable, unlike asset-based lending which also involves financing inventory.
- Under factoring, the underlying asset is sold to the “lender.
- Factoring is essentially a bundle of three financial services: a financing component, a credit component and a collections component.
- Factoring is a transactions technology because the underwriting process is based on hard information about the value of a “borrower’s” accounts receivable.
- Factoring addresses the opacity problem by focusing primarily on the quality of the obligor, rather than the “borrower”.

2.5 Fixed-asset lending

- Fixed-asset lending technologies involve lending against assets that are long-lived and are not sold in the normal course of business (e.g., equipment, motor vehicles, or real estate).
- At the underwriting stage, the focus is on assessing the market value of the asset – for equipment and real estate, this is often in the form of a formal appraisal.
- The contract structure typically specifies an initial loan-to-value ratio less than one. It also typically involves setting a loan amortization schedule with a final maturity less than the lifespan of the asset.
- Monitoring the borrower’s ability to pay (i.e., its cash flow) is tied to the observation of timely repayment as specified by the amortization schedule.

2.6 Leasing

- The lessor purchases the fixed assets and then simultaneously enters into a rental contract with the lessee (the “borrower”) that specifies the payment schedule.
- The contract often contains an option whereby the lessee can purchase the assets at the end of the lease at a pre-specified price.
- Leasing is a transactions technology because underwriting is substantially based on hard information about the value of the underlying asset.
- Leasing can be used to provide financing to opaque firms because the underwriting decision is primarily based on the value of the asset being leased.

2.7 Relationship lending

- Under relationship lending, the financial institution relies primarily on soft information gathered through contact over time with the SME, its owner and the local community to address the opacity problem.
- This information is acquired in large part by the loan officer through direct contact with the borrower and through observing the SME’s performance on all dimensions of its banking relationship.
- This soft information may often remain proprietary to the loan officer because it is not easily observed, verified, or transmitted to others.

2.8 Trade credit

- The importance of trade credit to SME financing is a compelling reason to include it as a lending technology, although it is not delivered by financial institutions.
- Trade credit may be particularly important in economies with weak financial systems, where industries with higher dependence on trade credit exhibit higher growth rates (Demirguc-Kunt and Maksimovic, 2002; Fisman and Love, 2003).
- It is not straightforward to classify trade credit as either a transactions based or a relationship based technology.
- Some have also suggested that suppliers may have an informational advantage over othe rlenders in evaluating their customers' ability to pay, solving incentive problems effectively, repossessing and reselling goods in the event of default, or withholding future supplies (see Petersen and Rajan, 1997 for a summary of this research).

3

Financial institution structure

3.1 Large versus small

- Large institutions may have a comparative advantage in transactions lending and small institutions may have an advantage in relationship lending.
- Large institutions: Economies of scale in the processing of hard information
- Small institutions: Fewer layers of management
- Large institutions are found to lend to larger, older SMEs with stronger financial ratios, and small institutions are found to rely more on soft information and lend to SMEs with which they have stronger relationships (e.g., Haynes et al., 1999;Cole et al., 2004; Scott, 2004; Berger et al., 2005c).

3.1 Large versus small

- Whether a sizeable presence of small institutions is necessary to promote credit availability for SMEs?
- One study finds that the likelihood that an SME has a line of credit from a large bank versus a small bank is roughly proportional to the deposit market presence of large versus small banks (Berger et al., 2006). This study also found few significant differences in the opacity or other characteristics of small businesses that borrow from large versus small banks.
- Another study found that the local market shares of large and small US banks have relatively little association with SME credit availability, but did not account for the size of the institutions making the loans (Jayaratne and Wolken, 1999).

3.1 Large versus small

- These two findings are consistent with the hypothesis that large institutions using various transactions technologies are just as able to supply SME credit to opaque SMEs as small institutions using relationship lending.
- An alternative hypothesis to explain this finding is that large institutions may be generally disadvantaged at SME lending, but that a sufficient market presence of small institutions efficiently arises endogenously when needed to provide adequate SME credit. Supporting this second hypothesis, several studies find that large institutions reduce their SME lending after mergers and acquisitions, but that other banks in the same local markets appear to respond by increasing their supply of SME credit substantially (e.g., Berger et al., 1998, 2001a; Avery and Samolyk, 2004).

3.2 Foreign-owned versus domestically-owned

- Foreign-owned institutions :

a comparative advantage in transactions lending because of access to better information technologies for collecting and assessing hard information.

a disadvantage in relationship lending in part because these institutions are typically large and may have difficulties in processing and transmitting soft information.

- In most of the studies, foreign banks are associated with greater SME credit availability (e.g., Beck et al., 2004a; Berger et al., 2004b; Clarke et al.,2005a).
- Although foreign institutions almost surely use transactions technologies, it is usually not known which of these technologies are employed or the opacity of the borrowers served.

3.3 State-owned versus privately-owned

- State-owned institutions may be expected to have a comparative advantage in transactions lending and a disadvantage in relationship lending because these institutions are typically large.

- State-owned institutions generally operate with government subsidies and often have mandates to supply additional credit to SMEs in general, or to those in specific industries, sectors, or regions.

- Although this might improve funding to creditworthy SMEs in principle, it could have the opposite effect in practice because these institutions may be inefficient due to a lack of market discipline.

3.3 State-owned versus privately-owned

- As well, much of their SME funding may be to SMEs that are not creditworthy because the lending mandates do not necessarily require that the funding be used to finance positive net present value projects, or that loans be repaid at market rates.
- In nations with substantial state-owned banking sectors, there may also be significant spillover effects that discourage privately-owned or foreign-owned institutions from SME lending due to a “crowding out” effect from subsidized loans from state-owned institutions.
- Some evidence also suggests that less SME credit is available in nations with large market shares for state-owned banks (e.g., Beck et al., 2004a; Berger et al., 2004b).
- Nonperforming loan ratios at state-owned banks tend to be very high, consistent with lending based on negative net present value projects, weak monitoring, and/or lack of aggressive collection procedures (e.g., Berger et al., 2005a).

3.4 Market competition

- Under the traditional structure-conduct-performance (SCP) hypothesis, market power reduces credit access through any lending technology.
- An alternative hypothesis suggests that for relationship lending, market power may be associated with greater access to credit for SMEs. However, under a different theoretical model, greater concentration may be associated with less credit availability using relationship lending(Boot and Thakor, 2000).
- Market power could increase credit availability for some SMEs through a positive effect on relationship lending, but may decrease availability for other SMEs that are more suited to one of the transactions lending technologies.
- The empirical results are mixed.

4

The lending infrastructure

4.1 The information environment

- Accounting infrastructure : Strong accounting standards and credible independent accounting firms are necessary conditions for informative financial statements, which are key to the financial statement lending technology.
- Sharing of information : Commercial and consumer credit bureaus provide formal organizational mechanisms for the exchange of payment performance data.
- Credit bureau information, where available, is used in conjunction with all of the lending technologies, but it is a driving component of one of the lending technologies, small business credit scoring.
- The evidence also indicates that access to historical credit information such as business credit bureaus is positively related to the presence of factoring (Klapper, 2006).

4.2 The legal,judicial and bankruptcy environments

- A country’s legal, judicial, and bankruptcy environments significantly influence the context in which loan contracting is conducted.

- The legal environment that affects business lending consists of the commercial laws that specify the property rights associated with a commercial transaction. The judicial and bankruptcy environments determine how well these laws are enforced in commercial disputes and in bankruptcy resolutions

- Empirical studies have shown that firms in countries with greater financial development and stronger property rights have increased levels of investment funded by external finance.

4.2 The legal,judicial and bankruptcy environments

- They can affect the deployment of contracting elements such as covenants,maturity, collateral, and personal commitments that have been shown to mitigate adverse selection and moral hazard problems (e.g., Chan and Kanatas, 1985; Berlin and Loeys, 1988; Sharpe, 1990; Berkowitz and White, 2004).

- The commercial law on security interests (collateral liens) in a nation, for example, is important in determining the efficacy of collateral in a loan contract, the essential component of the asset-based lending and fixed-asset lending technologies.

- The efficiency of the judicial and bankruptcy systems are also critical to credit availability.Recent theoretical and empirical research suggests that judicial inefficiency (i.e., highcostjudicial procedures) is associated with decreased access to credit (Jappelli et al., 2005).

4.2 The legal,judicial and bankruptcy environments

- The fact that asset-based lending has a significant presence in only four nations suggests that these legal, judicial, and bankruptcy environmental conditions represent significant hurdles.
- Asset-based lending and fixed-asset lending depend on a strong lending infrastructure, a weak lending infrastructure may foster the use of factoring and leasing. This is because under factoring or leasing, the underlying assets – accounts receivable or fixed assets, respectively – are removed from the ‘‘borrower’’ and owned by the ‘‘lender,’’ rather than being pledged as collateral.
- A weak lending infrastructure may encourage the substitution of relationship lending for some of the transactions lending technologies.

4.3 The social environments

- Evidence suggests that the level of social capital and trust may be important in facilitating the writing and enforcement of financial contracts.
- The greatest impact of the social environment is likely on relationship lending because social norms, religion, and culture may have the most effect on the production of soft information and the ability of banks to use this information to forge relationships.
- The social environment could also affect the production and use of hard information used in the transactions technologies, but likely to a lesser degree.

4.4 The tax and regulatory environments

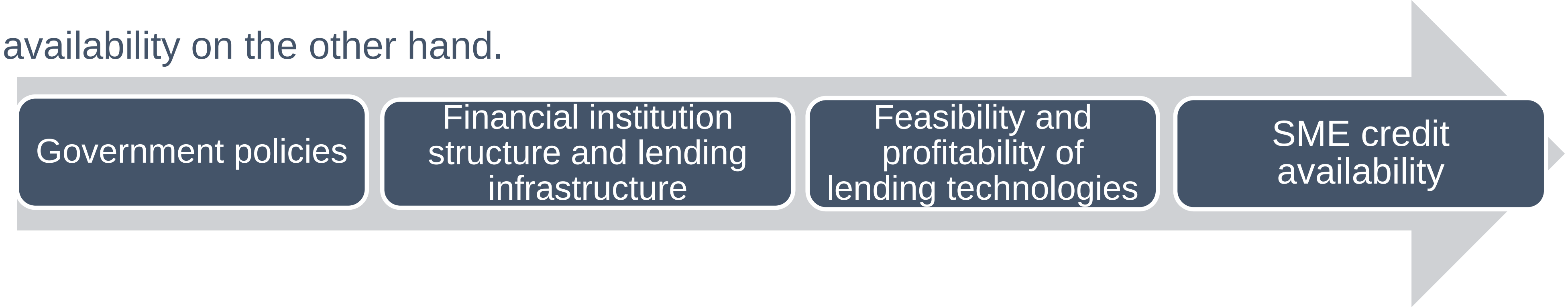
- For example, stamp taxes on factored invoices and certain types of value-added taxes can have negative impacts on factoring. Changes in capital regulations and tougher bank supervision in the US are also often cited as contributing to the reduction in supply of business credit or ‘‘credit crunch’’ in the US in the early 1990s (e.g., Berger and Udell, 1994; Peek and Rosengren, 1995).
- The regulatory environment may also affect SME credit availability by constraining the financial institution structure.

5

Conclusions

5 Conclusions

1.We emphasize a causal chain in which the lending technologies provide the crucial link between government policies and financial structures on the one hand, and SME credit availability on the other hand.



2.A common oversimplification is to treat all transactions lending technologies as a homogeneous group that is not suitable for lending to informationally opaque SMEs.

3.The finding that large financial institutions have a comparative advantage in transactions lending technologies and comparative disadvantage in relationship lending does not necessarily imply that large institutions are disadvantaged in providing credit to informationally opaque SMEs.

5 Conclusions

4.Take into account the presence of foreign and state-owned institutions, as well the presence of large and small institutions and conventional measures of financial institution competition, particularly when analyzing developing nations.

5.Our investigation strongly suggests that lending infrastructures have important effects on SME credit availability. ‘‘Better’’ lending infrastructures may significantly improve SME credit availability through facilitating the use of the various lending technologies.

6. A key issue in testing the framework is the identification of the lending technologies.

THANKS