VIABILITY OF PRO-SME FINANCING SCHEMES: A DEVELOPING COUNTRY PERSPECTIVE

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Abstract

To curb SME financing difficulty, various schemes were suggested as alternative financing techniques that include, among others, relationship lending, factoring, credit scoring, leasing, and credit guarantees. This paper aims at examining the viability of each of the schemes by considering the institutional and legal conditions in developing countries. Critical analysis of extant body of literature revealed that not all pro-SME financing schemes are suitable for SMEs in developing countries. This is because they demand development of legal, informational, and financial frameworks that the countries acutely lack at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can be effectively used to ease SME access to finance if well designed credit offices are in place. Similarly, credit guarantee schemes are crucial as an interim solution if they are allowed to run without government subsidy as it aggravates moral hazard.

Keywords: SME, Relationship Lending, Factoring, Credit Scoring, Leasing, Credit Guarantee

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1 Introduction

Despite their notable contribution to economic growth through creating employment, narrowing income gap and alleviating poverty, SMEs are financially constrained. Credit market imperfections and under-development are among the causes of SME financing problems. Scholars seldom agree on whether SME oriented intervention is warranted because some tend to downplay intensity of the problem and claim the market will take a corrective action, while others contend that unless mechanisms are devised targeted at ameliorating the constraints, SMEs financing problem will remain unresolved. This paper reviews the extant body of literature on mechanisms that mitigate SME financing problems.

It was found that pro-SME financing schemes can be broadly classified into market mechanisms and schemes designed to curb the financing problem. While relationship lending falls into the first category, all the rest are legitimately classified into the second group. The SME friendly schemes themselves can be further classified into those that do not require state intervention and that necessitate active involvement of the government. Factoring, credit scoring, lease financing, and financial statement based lending are schemes supposed to need no public intervention while credit guarantee is largely run by governments. We have brought to light controversies in literature and also provided our own evaluation on the feasibility of each scheme from a developing country perspective.

Relationship lending is considered as the panacea for SME financing troubles, but our review of both theoretical and empirical studies revealed that its real impact on credit access, cost, and collateral requirement are less well understood. Controversial are its causal relation with SME credit access, cost of borrowing, and collateral requirement. No conclusive evidence has been found that answers such questions as how relationship is affected by competition in the banking sector and by borrowers establishing relationship with more than one bank. In the face of all the controversies and based on the fact that dynamisms of the credit market can erode its potential benefits, we argue that this is not a reliable mechanism for easing SME financing problems.

While the SME friendly financing schemes are designed to address the problems of opacity and lack of collateral, their efficacy is marred by absence of the financial, institutional and legal framework in most developing countries. Factoring is crucial as it allows a firm to obtain financing based on the creditworthiness of its customers. However, it demands legal framework, system of record keeping, and is not profitable in developing countries due to high degree of fraud. Similarly, credit scoring, despite its economic soundness for both the lenders and borrowers, it is difficult to run owing to high cost of technology, absence of credit information, and poor record management. Leasing appears to be relatively

more feasible provided that there are firms engaged in the business operating in adequate number to avoid the potential development of monopolistic power that leads to leasing services too costly for small firms to afford. Financial statement based lending can help small firms get away with collateral requirement or at least minimize it, but its effectiveness hinges on existence of a well-developed and accountable public accounting service.

Credit guarantees are designed to avert market imperfection, and are mostly administered by the government. While their role on easing small firm credit access is phenomenal, any unheeded subsidy by governments may prove counterproductive. Literature shows that for such a scheme to be judged successful, sustainability and reduction in cost of borrowing need to exist. Unwisely run credit guarantee programs may place heavy burden on the government and distort the credit market by intensifying moral hazard. In general, our review of the schemes believed to mitigate SME credit access yielded in the fact that not all are suitable for developing countries. This is because they demand development of legal, informational, and financial framework that the market acutely lacks at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can efficiently run if well designed credit offices are in place. Considering their great potential in easing access, credit guarantee schemes are crucial as an interim solution.

The rest of the paper is organized as follows. Section 2 reviews literature on relationship lending, bringing into light the most contentious matters that occupy much of the space in literature. Section 3 discusses schemes supposed to ease SME access to the credit market by assessing the utility of each from a developing country's perspective. The last section concludes.

2 Relationship lending

Literature classifies lending into relationship-based and transaction-based (see Berger and Udell, 2006). Relationship lending relies on 'soft information' acquired through a continuous bank-customer relationship, as opposed to transaction based lending that heavily relies not on relations but rather on hard borrower information amenable to objective verification. Studies record that informational opacity of SMEs renders transaction lending less feasible, while making relationship lending more SME friendly (see Petersen and Rajan, 1994 and Berger and Udell, 2002). According to Boot (2000) relationship lending has two most notable characteristics. The first is that the lender acquires customer specific information with an exclusive right to use in making credit decisions. Such information is obtained mostly through routine interactions with the customer and may include the movements of deposit account, personal integrity, business outlook, managerial capability etc. Secondly, the lender evaluates the worth of acquired information through multiple interactions over time and across mixtures of products. The lender exercises full advantage over competitors in extending credit to a relationship customer as the other lenders cannot accumulate a comparable amount of information over a short period of time.

Berger (1999) identifies three conditions to be fulfilled for a lending to be of a relationship type. First, information the lender passes need to be more than what is publicly available. Secondly, information should be accumulated over time through a continuous interaction with the borrower. Thirdly, such information should be confidential in nature and the lender should keep it with utmost care. This is because the lender may lose its principal position as a source of credit if competitors get hold of the same proprietary information gathered over time. In general, combination of the foregoing attributes render lending relation based.

Benefits and costs of relationship lending can be discussed both at SME level as well as from market point of view. From individual borrowing firm perspective, relationship is supposed to impact the cost of loan, access to credit, and extent of collateral requirement (see Berger and Udell, 1995). Theory postulates that firms that raise loan from a bank with which they have a long standing relation can do so at a reduced rate of interest. It is also posited that lending based on relationship is likely to reduce collateral requirement because the proprietary information can serve as a substitute for fixed assets that can be pledged as a security for a loan. Besides, relationship lending increases access to disenfranchised firms such as SMEs.

From market point of view, relationship is has two crucial benefits to the credit market that can potentially attract more lenders (Boot 2000). The first is that it helps lenders cut cost of information acquisition as the borrower reveals valuable information that he would not have shared with the financial market. The bank that can cut costs in such a manner will transfer part of the advantage to the borrower by charging a lower interest. Moreover, as discovered by Berlin and Mester (1999), a bank that keeps core deposit by its relationship borrowers can withstand systemic shocks and hence avoid loss of profit. At the same time such a lender can transfer part of the benefit to borrowers by charging a lower interest. In either case, it is a win-win for both the lender and the borrower. Secondly, relationship lending encompasses various contractual characteristics that can potentially enhance welfare. Explaining how this is so, Boot (2000) states that relationship lending offers flexible terms that can be modified through agreement between parties at either end of the loan contract. It may also contain various covenants that can help avert potential conflicts of interest, and in cases where lending is secured by collateral, relationship lending is believed to ensure a

less costly monitoring, without which a loan may not be extended at all.

However, relationship lending is not without cost. It indeed has costs that include a 'soft budget constraint'[1] and hold-up problem. Soft budget constraint arises when borrowers expect that their extended relationship with the bank makes the bank lenient in taking action when they fail to abide by terms of the loan contract. For instance, the borrower may not be diligent in respecting repayment schedule out of a belief that the bank will tolerate because the loan is not backed by hard information that facilitate strict enforcement of contractual agreements. Similarly, the bank may not be able to take action immediately as this may spoil a long standing relationship with the borrower, causing the borrower to leave for good, and rendering all the proprietary information the bank has collected over years worthless.

The other problem of relationship lending is a hold up problem wherein the borrower becomes locked into a single bank allowing the bank to extract unreasonable rent by charging more than the market rate. The bank has proprietary information about the borrower that it exclusively owns, and may believe that the borrower cannot get credit from other lenders. This leads to the bank charging more than normal interest because the borrower is believed to have no choice than absorbing it all. Degryse and Cayseele (1998) based on European small business data, report that the hold-up effect is so huge that it offsets the benefits that can be extracted from relationship lending. The hold-up problem can however be mitigated by establishing multiple bank relationship, albeit at the cost of reducing credit access. Elsas and Krahnen (1998) from a review of thousands of credit files of banks in Germany, find that firms that managed to establish multiple bank relationships averted a lock-in threat.

Studies on the link between relationships and access and cost of borrowing are plagued by controversies that include determining effective proxy for relationship. Some studies merely use length of relationship as measure of degree of relationship while others go beyond number of years to using the number and type of financial services obtained from a bank. Empirical studies report controversial results in relation with various aspects of relationship lending, including relationships and cost of loan; relationships and collateral requirement; length of relationship and cost of loan; number of relationships and cost of loan; competition in the banking sector and relationship; and bank size and relationship. Bringing into light the aforementioned matters of controversy is believed to help in forming a tentative view about relationship in terms of its importance in easing SME financing problems. The following paragraphs present the controversies with their associated empirical evidence.

Small businesses are informationally opaque and hence face the problem of information asymmetry. Theory in the mainstream finance predicts that a lender charges informationally opaque borrowers a higher interest to compensate for default risk not sufficiently measured due to lack of information. Relationship lending is supposed to mitigate the problem of information asymmetry, and hence lead to lower interest rate on SME loan. Earlier empirical studies report insignificance of relationship lending in reducing interest rate. For instance, Petersen and Rajan (1994) did not find any significant change to rate in response to prolonged relationship, nor to acquisition of financial services. On the other hand, Berger and Udell (1995) show that a prolonged banking relationship reduces interest rate. Similarly, Boot (2000) finds that relationships give rise to better contract terms so much so that it offsets hold-up problem. Blackwell and Winters (1997) explain such an effect is explained on the ground that banks acquire valuable information at virtually no cost and they then transfer part of the benefit in the form of reduced interest. Offering a different perspective, Berlin and Mester (1999) find that reduced interest may also be in response to borrowers deposit held at the bank that serves as major source of loanable funds. Contrary to the foregoing results Degryse and Cayseele (1998) report that a prolonged relationship increases interest rate while acquiring other financial services can lead to a reduction. Likewise, Hernandez-Canovas and Martinez-Solano (2008) find that although relationship enhanced SME access to credit in Europe, it is actually at the cost of raising interest rate.

Equally contentious is the effect of relationship on collateral. Inability to pledge collateral is one of the reasons why SME face a serious challenge in accessing credit. Most transaction based lending schemes require collateral as a condition for extending credit, and therefore relationship lending is considered to be ideal way out of a rigid collateral based lending. This follows the theoretical argument that lenders, through their relationship, acquire valuable borrower information that can substitute collateral. Nonetheless, empirical results are not conclusive. Berger and Udell (1995) find that firms with longer relationship are

[1] The concept 'soft budget constraint', first introduced by (Kornai, 1979) , was intended to reflect a case in socialist economies where public enterprises tend to rely on state bail out in case of adverse performance. Kornai (1979) claims that the soft budget syndrome leads to enterprises not acting prudently to at least cover their cost of doing business on the expectation that the state will intervene if they face a budget shortage. This, according to him, explains why state owned enterprises in the socialist system are inefficient. The soft budget constraint is opposite hard budget constraint where firms must operate within a fixed amount of budget and where there is no hope for a bail out by another party. Although the concept was originally intended to describe an economic system, its scope of application has expanded significantly since its introduction. Presently the concept is applied to conditions in which one party expects to be bailed out by another party in times of adversity (see for details Kornai et al, 2003). In bank-borrower relationship soft budget constraint is said to exist when the borrower fails to act prudently in servicing loan expecting that the bank would modify loan terms in his favor owing to a long standing relationship.

likely to get loans without pledging collateral. Similarly, Degryse and Cayseele (1998) based on a review of eighteen thousand loan files from Belgian banks, find that relationship decreases the probability of pledging collateral, only slightly though. In contrast, Ono and Uesugi (2009) find that borrowers with a long-term relationship are more likely to pledge collateral, and relationship entails increased cost of monitoring for the lender. Based on this finding, they argue that relationships and collateral are not substitutes, they are rather complementary. Similarly, Hernandez-Canovas and Martinez-Solano (2008) report that relationship foster trust between the bank and borrower, but with increased likelihood of pledging collateral. Shedding more light on the matter Harhoff and Körting (1998), find that collateral requirement increases with a rise in loan volume and decrease in firm size. Also explaining cases where collateral requirement can prevail even where there is a relationship, Degryse and Cayseele (1998) report that firms are more likely to pledge collateral when they shop other information sensitive financial services.

The association between the number of relationships on the one hand and loan interest rate and collateral requirement on the other are also debatable. Petersen and Rajan (1994) find that firms that maintain multiple bank relationship were charged a higher rate. Similarly, Degryse and Cayseele (1998) report that while firms without a main bank are charged a higher interest rate, those with a main bank are not. The number of bank relationships affects collateral requirements. According to Harhoff and Körting (1998), collateral requirement increases as the number of bank relationship increases. This is consistent with Cole (1998) who finds that firms with a main bank have a better access to loan. In contrast, for Detragiache et al (2000) "multiple banking ensures a more stable supply of credit, and reduces the risk of premature liquidation of the investment project". Similarly, Hernandez-Canovas and Martinez-Solano (2008) show that maintaining two bank relationships results in getting the cheapest debt. Despite contrasting empirical evidence on the relative importance of single versus multiple relationship, studies suggest that the number of relations are often determined by systemic factors, rather than a choice by a small firm. For instance, Ongena and Smith (2000) find that firms are more likely to maintain multiple relations in countries with relatively stable and unconcentrated banking sector.

Impact of bank competition on relationship is the other bone of contention. While some claim that competition has a diminishing effect on relationship, others contend that competition makes relationship even more valuable. Petersen and Rajan (1994) argue that the value of proprietary information owned by a bank fades away as competition increases because borrowers have a better chance of securing loan. They discovered in their later study (see Petersen and Rajan 1995) that young firms tend to have a better access to credit in a concentrated market than in a competitive one. In contrast, Boot and Thakor (2000) posit that relationship lending increases with increase in bank competition, albeit at the cost of diminishing value of a loan to the borrower. This has been empirically confirmed by Ongena and Smith (2001) who find that competition strips off market power from banks and therefore gives rise to more valuable long-term relationships. In sum, although the theoretical arguments of both sides are seemingly tenable additional empirical evidence is essential to resolve the controversy. More specifically, cross country studies encompassing wide ranging financial systems and economies will shed a stronger light on the debate.

The other controversy relates to the significance of bank size on relationship lending. According to Berger and Udell (2002) smaller banks are structurally better suited to establish a relationship lending with small firms. This is due to the fact that small banks have fewer managerial layers and consequently exhibit lesser agency problem owing to the fact that loan officers can be closely supervised so that they act in the best interest of the bank(see also Cole et al,2004). Describing the conditions when large banks can extend credit to smaller firms (Cole et al,2004) state that" large banks are more likely to extend small business credit when the firm keeps formal financial records, is larger, has a longer track record, and has greater cash reserves". Likewise, Bakker et al (2004) find that owing to their ease in acquiring information via relationships, small banks have edge over large banks in relationship lending. Then it follows that bank mergers and consolidations are likely to lead to worsening of SME financing problem (Akhavein et al. 2004). However, evidence from US reveals that bank consolidation is followed by emergence of de novo banks that target small firms abandoned by the consolidating banks. Eventually, as Udell (2008) puts it "it is not clear that banking industry consolidation in the US will ultimately be associated with more credit constraints for SMEs". Neither is it clear whether consolidation adversely affects SME credit access elsewhere in the world.

In general, our discussions in the preceding paragraphs revealed that the extant body of theoretical and empirical literature is plagued by controversies. We noted that lack of uniformity in the proxies used to measure degree of relationship is partly responsible for the disparity in empirical results on a number of important factors.

3 Innovative instruments and support mechanisms

While relationship lending is part of market mechanisms believed to enhance SME credit access, it is not amenable to intervention. The market rather than a policy intervention is a key to its ability to serve

the SME sector. In particular, its efficiency in encouraging banks in developing countries to channel funds to the small firms is questionable, because the market in those countries is seriously underdeveloped, and banks are uncompetitive, inefficient, and often face various regulatory strings. It is therefore not reliable enough as it puts much of the responsibility in the shoulders of banks that pursue the ultimate goal of maximizing wealth rather than aim at promoting small businesses development. It then follows that instruments and schemes that enhance SME access to credit ought to be crafted. We discuss in the following series of paragraphs SME friendly innovative techniques that include factoring, credit scoring, lease financing, financial statement lending, and credit guarantee schemes. Whilst the first four schemes function without needing direct state intervention, the last one heavily relies on governmental action.

3.1 Factoring

Factoring is a financing scheme wherein a firm sales its accounts receivables to a financial institution called a factor. Through factoring, a firm transfers credit risk and receivable collection management to the factor, and customers are notified to effect payment on their account directly to the factor. A factor is a financing firm that makes business buying and collecting accounts receivables of other firms. When factoring, a firm transfers its receivables to the factor and immediately collects cash by the amount of face value of receivables less interest, factoring fee and portion of the receivables held as a cushion against uncollectable. The seller of receivables is paid the remaining balance only when receivables are collected in full. Although factoring allows a firm to effectively transfer receivable collection management, transfer of credit risk to the factor depends on mode of the factoring contract: recourse or without recourse. If factoring is on a without recourse basis, the seller transfers the entire credit risk to the factor whereas when it is on a recourse basis the factor is free because credit risk is ultimately borne by the seller(see Bakker et al. 2004).

The most unique attribute of factoring is that it is founded based on a factors assessment of risk portfolio of a debtor, rather than the seller that transfers it. This is important because a high risk firm unable to obtain credit from the formal market can raise funds on account of its debtor's good credit standing. Factoring is important even in low credit risk firms because it helps firms to free cash that is temporarily tied up in receivables, thereby raising the amount of cash available to take advantage of investment opportunities.

Factoring was originally designed to assist larger businesses in the management of working capital, enabling them to turn less liquid receivables into cash. Besides, it permits firms to transfer collection activities and the associated costs, which consume considerable amount of time, to the factor. Sopranzetti (1999) postulates that factoring can also be used to avoid under investment problem[2] that highly indebted firms face. He argues that through factoring highly indebted firms can avert raising additional debts by converting their receivable into cash.

Following realization of its potential role in easing credit access, factoring has become part of alternative SMEs financing schemes. Two aspects make factoring attractive to SMEs. First, it averts the problem of information asymmetry that impedes SME access to formal credit market. In a factoring contract, the factor values credit standing of the debtor much more than the seller. In other words, a factoring contract relies on the value of the underlying receivables rather than the seller of those receivables. Consequently, informationally opaque firms can access a short term finance using the good credit standing of their clients.

Factoring constitutes part of the financial market in many advanced countries and emerging markets. The global factoring turnover stood at €2.23 trillion in 2013 (FCI 2014), and it is a fast growing market with a 10% average annual growth rate since 1993. However, the market is concentrated in a few developed countries and emerging market with sizeable share controlled by the former. The biggest market is in Europe with a total turnover of €1.35 Trillion, accounting for 60% of the global annual turnover compared to just €23billion for Africa that accounts for only 1% of the global turnover. Country wise, with annual turnover of €308billion the UK has the largest factoring market in the world, followed by France(€200billion), Italy(€178billion), and Germany(€171billion). More than half the European factoring market is controlled by UK, Italy and France. Growth is very fast in Asia followed by Australasia.

Despite its promising features as alternative financing tool for SME, participation of the sector in the factoring market is unremarkable. Data from UK shows that factoring and trade discounting constitutes only 6% of additional SME financing (Soufani 2000). According to Soufani (2002) lack of SME awareness of its potential in easing credit access is one of the factors that explain low level of participation. Besides, despite a belief that factoring resolves the problem of information asymmetry by focusing on the debtors credit standing, evidence from UK shows that factors do consider the sellers ability in credit monitoring and bankruptcy risk (see Sopranzetti 1998). Consequently, a seller that has a higher bankruptcy risk would be unable to factor the entire pool of accounts receivable

[2] Underinvestment problem was first identified by Myers (1977), and involves a condition in which a highly levered firm becomes unable to add more leverage because so doing may send a wrong message to the firms current stockholders. He postulates that additional high risk debt by an already indebted firm, even where there are positive net present value projects, may eat up part of value of the firm because of its adverse consequences in net worth of future projects.

(Sopranzetti, 1998). Such a seller will factor high quality receivables without recourse, moderate credit risk receivables with recourse and does not factor at all high risk receivables. In general, this casts doubt on the notion that a factoring contract is seller-risk-blind. Strengthening the foregoing claim, Soufani (2000) reports that factoring is not available to all firms, as evident in UK where only firms with a better credit screening capacity (measured based on turnover ranging from £250,000 to £3 million) are part of the market.

Factoring was posited to be of paramount significance especially in countries with weak secured lending laws, inefficient bankruptcy systems, and weak information infrastructures. Contrary to the foregoing hypothesis, however, cross country comparison shows that factoring fared well in developed countries and not so in developing ones. As reported by Bakker et al (2004), while factoring is undertaken on a without recourse basis in developed countries, it is done on a recourse basis in emerging economies due to the fact that information is not adequately available to assess the level of default risk. In terms of volume, factoring market is found to be larger in countries with a higher level of economic development (Klapper 2006). This implies that firms in developed countries can take more advantages of factoring than firms in emerging economies.

Bakker et al (2004) attribute the disparity in the prevalence and efficiency of factoring market across countries to the difference in information infrastructure, legal environment, tax, and regulatory environment. Information about debtor's payment history is essential for factors in assessing the probability of default, and absence of credit data limits the coverage to few high quality receivables. Similarly, the legal and judicial system plays a pivotal role in fostering the development of factoring. The judicial system need to be efficient in handling disputes between a factor and the seller so that factoring firms feel secured of potential risk of default on the side of sellers. Equally important for development of the factoring industry is an encouraging tax system. If the tax rule of a country subjects factoring to VAT or other forms of sales tax, firms will be discouraged because it raises cost.

In general, although factoring has a potential as an alternative means of financing for SMEs, its success in developing countries hinges on legal and institutional development, the absence of which has impeded access to the formal credit market. As reported by Klapper (2006), the industry in developing countries is plagued by widespread fraud in the form of bogus receivables, ghost customers etc.

3.2 Credit scoring

Credit scoring is a techniques used by financial institutions to determine credit rating of a loan applicant in order to measure the probability of default. Based on loan repayment history and personal characteristics of the customer, credit scores are developed by the help of statistical software to predict the likelihood of default. Information for credit scoring is usually obtained from customer application form and credit bureau. A higher score represents good credit standing while a lower score represents a poor standing. While some banks set a cutoff point and strictly apply the score in the accept/reject decision, others use the score only as a supplement. Shedding more light on how a score is used, Berger and Frame (2007) classify banks into "rule" banks and "discretion" banks. The "rule" banks base their accept/reject decision on the score, whereas "discretion" banks use the score only as supplementary information to the body of evidence they have about the customer's credit standing.

Credit scoring was first used by large banks in issuing credit cards, car loans and mortgage loans (Mester 1997), and banks started applying credit scoring in extending credit to SMEs latter on. The most important benefits of credit scoring are that it minimizes loan processing time, reduces cost, and increases credit availability. As Mester (1997), in his study on banks in the US city of Philadelphia reports, banks were able to process a loan in less than an hour while it takes, on average, 12 hours otherwise. The huge cut in the loan processing time gives rise to reduction in the loan processing cost that allows a bank to charge a smaller amount of interest. Besides, credit scoring results in cost savings that eventually results in a lower interest rate on loans. Its use also makes more credit available to businesses especially to SMEs because credit scoring enables banks to measure credit risk more accurately and consequently makes SME loans attractive to large banks as well, increasing the overall supply of credit to the sector (Mester 1997).

Country case studies (that concentrate in the US) report a positive correlation between credit scoring and SME credit access. Mester (1997) finds that credit scoring breaks the geographical barrier that impedes SME credit access because banks can extend credit without a need for physical presence in the place where SMEs operate. This implies that so long as information obtained from credit bureaus can be reasonably trusted, it does not matter whether the SME is operating in the neighborhood or located far away. Similarly, Frame et al (2004), in their survey of 99 large banks in the US, find that credit scoring increases SME lending. They study the effect of credit scoring by income groups as Low and Moderate Income area and Middle and High Income area, and conclude that credit scoring increases access irrespective of disparity in income. They report that banks extended $2.2 billion more loans in 1997 as a result of using credit scoring. Berger et al (2005) who study impact of credit scoring by classifying

borrowers in "marginal[3]" and "nonmarginal[4]", report interesting results that credit scoring has a differential effect on the two groups. They find that availability of loans less than $100,000 that corresponds to "marginal" group increases but at increasing loan price because of its higher risk. On the other hand, no significant increase in credit availability is observed for relatively higher loans in the range of $100,000 and $250,000 corresponding to "nonmarginal" group, except that loan price has declined along with a fall in their credit risk.

With a positive impact on access to funds, credit scoring is seemingly an ideal tool for SME financing. However, its potential utility in developing countries is marred by absence of requisite conditions. Wendel and Harvey (2006) identify several factors that restrain the development of credit scoring in developing economies that can be summarized into the following three major issues: absence of credit information, poor record management, and high cost of credit scoring technology. Credit bureaus are necessary as they allow a lender to easily access customers' loan repayment history, and it can serve as a more reliable source on which to base credit decisions. No less important is maintenance of customer credit information in a way compatible with the credit scoring model. The cost of credit scoring software may be at times not affordable to smaller banks whose business mostly depends on the SME sector. In general, while credit scoring opens another opportunity to SMEs, its functionality in developing countries is restrained by absence of credit information and poor credit record management.

3.3 Lease financing

Leasing is a contract wherein a firm rents assets agreeing to pay periodic rents to the owner. The owner of the leased asset, often known as a lessor, allows the assets to be used by another firm called a lessee in consideration of rents collected. The lessee acquires the right to use the asset over the term of the lease. Lease contracts can be classified into capital or operating depending upon the length of the term and whether ownership title to the leased asset will eventually be transferred to the lessee. Leasing contracts that stipulate ownership to be transferred to the lessee are called capital leases. Leasing is one of the widely used schemes of acquiring capital equipment. It is more popular in developed countries. For instance, in the US about a third of capital equipment used by corporations are leased (Chemmanur et al. 2010)

Leases offer an alternative to raising debt especially when credit is difficult to come by. Firms that are unable to raise debts can use leases. Leasing instead of financing acquisition through debt is considered economically sound based on the ground that periodic rents offer a higher tax shield than interest expense. However, literature is inconclusive as to whether leasing can substitute debt. While some scholars posit that leases can substitute debt, others contend that the two are only complementary. Deloof et al (2007), in their study of Belgian SMEs, find that leasing and debt can be substitutes when the tax differential between the lessor and the lessee are removed. On the other hand, Lewis and Schallheim (1992) argue that lease and debt are complementary. Their argument is founded on the premise that leasing transfers excess tax shields and firms that make use of lease often tend to have more debt built up in their capital structure compared to firms that do not use lease financing. For Lewis and Schallheim (1992), more leases do not essentially decrease debt but rather increase the firm's potential for raising debt, leading the firm to be equally leveraged as firms that do not use leasing.

Apart from its possible advantage as a source of a higher tax shield, leasing reduces the lessee's transaction cost of buying an asset and also eliminates uncertainties about cost of maintenances. Moreover, leasing helps transfer of technological risk (Chemmanur et al. 2010) that may arise due to the asset being functionally inappropriate or obsolete in the face of a better product demanded by the market. Chemmanur et al (2010) consider leasing as an equilibrium solution when there exists a two sided asymmetry in which the lessee is uncertain about the quality of the leased asset and lessor about the maintenance cost.

Leasing has been identified as one of the financing sources for SMEs (Marianne et al. 2001). Explaining the special use of leasing in SME financing, Berger and Udell (2006) show that the financing problem SMEs face due to their opaqueness can be mitigated as the underwriting decision in leasing relies on the value of the underlying asset rather than value of the firm.

Leasing as alternative SME financing scheme can be effective where there are leasing firms available in adequate number. While such firms are available in developed countries, their presence in developing economies is restrained by financial and non-financial constraints. According to a study by IFC (1996), supply of credit and access to the capital market are crucial for the development of the leasing industry. In addition, there has to be a legal framework that assures property right. Due to a weak credit market and legal framework, leasing has not witnessed a robust growth in developing countries, especially in the SSA region. This is evident from the fact that IFC's investment experience in SSA accounts for only 4.7% of its worldwide investment, compared with 29.2% in Asia, 52.1% in Europe, Middle East and North Africa, and 13.2% in South America (World Bank 2008).

[3] these are borrowers that did not have access to credit previously, and can get credit only due to bank's use of credit scoring (see (Berger, Frame, and Miller 2005)

[4] these includes borrows that can borrow from the bank even in the absence of credit scoring (see (Berger, Frame, and Miller 2005)

3.4 Credit guarantee service

While all the previous schemes function without public intervention, credit guarantees require active involvement of the government either directly as a guarantor or indirectly as promoter of guarantee programs. As defined by Deelen and Molenaar (2004) a credit guarantee is "a financial product that a small entrepreneur can buy as a partial substitute for collateral". The foregoing definition highlights the fact that a guarantee serves as a security where a borrower does not have collateral to pledge for a bank loan. It also implies that guarantee is a financial service for which a borrower pays. In a credit guarantee, the guarantor stands between the lender and the borrower to make good a loan when default takes place.

Credit guarantee programs are designed in response to market imperfections.(see Zecchini and Ventura 2006). They basically aim at enabling credit constrained group to access bank credit (Beck et al. 2010). Its main targets are SMEs and startups that have the capacity of repaying a loan but unable to get it either because they have no collateral or they are financially opaque (Deelen and Molenaar 2004). The guarantor provides assurance to hesitant lenders that the borrowers will honor their obligation and would responsible in case they default. Credit guarantee schemes are believed to introduce otherwise reluctant lenders to new clients showing them that if not for the lack of collateral and financial information lending to these firms is commercially viable. Vogel and Adams (1997) posit that lenders experience with borrowers under a guarantee program enables them to collect sufficient information useful in granting credit at a latter point of time without a guarantee. Similarly, borrowers learn how to obtain formal credit and graduate into borrowing without a guarantee. A guarantee scheme also help firms to wither away credit restrains during periods of credit crunch. Explaining the significance of guarantee schemes, Janda (2008) postulates that guarantee programs are vital in the time of credit crunch owing to the fact that banks become overly cautious in lending especially to smaller firms. Intervention through a credit guarantee works well in providing assurance to lenders that their money will be paid back irrespective whether the borrower honors the debt or not. Empirical evidence shows that governments often rush towards setting up guarantee programs to mitigate credit famine following systemic financial crisis. For instance, following the 2008/9 financial crisis, the British government launched credit guarantee program by the amount of £50 billion in order to boost bank credit to the SME sector (Economist 2009). This testifies that guarantee programs serve as mechanisms for averting problem of credit access during the financial crisis.

Despite their salient benefits in enhancing SME credit access, literature is inconclusive as to the real economic impact of guarantee programs. Although its advocates argue that such schemes boost welfare because they reduce bank's need to extract rent from entrepreneurs (see Arping et al, 2010), critics claim that it intensifies the problem of adverse selection and moral hazard instead of mitigating them. According to Janda (2008) adverse selection comes into play where the firm's benefits from the program have low profit and socially inefficient projects. Moral hazard occurs when lenders fail to diligently screen credit owing to the fact that they are any ways insured by the guarantor against risk of default. Janda (2008) therefore claims that both moral hazard and adverse selection can be mitigated by removing state subsidy. Arping et al. (2010) also agree that guarantee schemes may end up being counterproductive by undermining firm's incentive to cut costs. Honohan (2010) harshly criticizes guarantee schemes as a mere political tools devoid of a perceptible welfare enhancement and that their benefits are at best vague.

Opinion is also divided as to whether credit guarantee programs are merely short-term solutions to market imperfection or a lasting panacea to fill the financing gap SME are facing. Levitsky (1997) calls for more resources to be deployed for maintaining guarantee schemes as they provide a lasting support for SME. Vogel and Adams (1997), on the other hand, see credit guarantee merely a short term solution while SME credit access can be improved through a financial reform. This implies that credit guarantee is not sustainable to be used as a lasting solution for easing SME financing problem. Supporting the foregoing view Honohan (2010) argues that guarantee schemes cannot substitute institutional development that aims at enhancing the effectiveness of the financial system. Despite the ongoing controversies, credit guarantees are considered by many as superior to other government sponsored SME support programs. As Janda (2008) puts it, they are robust policy measures that are better than interest subsidy. In terms of effect on the credit market, guarantee programs are believed to cause less damage than provision of cheaper funds to lenders (Vogel and Adams 1997).

Credit guarantee scheme funded by the state is a common place in most developed countries (Zecchini and Ventura 2006), and it helped stimulate the formation and growth of SMEs beyond what is achievable without. Credit guarantee programs have proved the most efficient tools of job creation. For instance in Canada, the state created a job with an average guarantee cost of approximately $2,000 (Riding and Haines 2001), and this is the cheapest way of job creation the government could ever find. In a more recent study Riding et al. (2007) report that about half the guarantee service recipients in Canada started business using guarantee backed loans. Most surprisingly, they find that with 10,000 loans per annum, the government managed to create 22,000 new full-time jobs. Their job creating capacity is higher in low income areas (Craig et al, 2008), implying that such schemes are critically important in cutting

unemployment in most developing countries. Guarantee schemes also reduce business failure and bankruptcies (Hancock et al, 2007), accelerate growth (Bradshaw 2002), and stimulate investment (Uesugi et al. 2006). They also raise tax revenues of the government and serve as additional source of revenue when the state operates the program on a fee basis (Bradshaw 2002).

Nonetheless, in most emerging markets and developing countries the schemes did not succeed as well. Nigrini and Schoombee (2002) based on a study on credit guarantee programs in South Africa, report that although it offered the government a viable solution to SME financing problem there are constraints casting a shadow on its utility. Similarly, Boocock and Shariff (2005) report that it did not work well in Malaysia as there were so many defaults compelling lenders to absorb significant portion of the loss. Defaults are higher where the government is involved in the risk assessment (Beck et al. 2010). Zecchini and Ventura (2006) based on their study on the state sponsored guarantee programs in Italy, report that the scheme is not sustainable due to significant subsidy element. Their claim is consistent with the premise that subsidy gives rise to moral hazard problem causing depletion of the fund. This is also supported by Columba et al. (2010) who find that moral hazard effect is at times so large as to entirely deplete the benefits that can be extracted from it. They argue that the program offers no incentive to banks to be diligent in screening loans, raising the risk of default. Moreover, the program is believed to have flaws from the dimension of competition that is vital in the formation of most efficient group of firms. Kang and Heshmati (2008) charge that subsidized guarantee programs decelerate death of inefficient firms. According to them, firms that do not put scarce societal resource into its best use will stay in the game for a prolonged period, also placing barrier to entry against more efficient new firms.

Empirical evidence shows that there are certain requisites to the success of guarantee programs. Competent financial system with sound banks is one of the preconditions since it compels banks to compete for clients (Levitsky 1997). Reinforcing the above claim, Cowling (1998) in his study on credit guarantee scheme in UK, discovered that usage rate is the greatest in regions with a relatively well developed financial markets, and localities with poorly developed financial intermediaries are unable to make use of guarantee scheme as a tool for averting financial restraint. Zecchini and Ventura (2009) stresses that care in selecting target groups of beneficiaries is the other vital pre requisite for the successful guarantee scheme. They report that state sponsored guarantee schemes in Italy are relatively more successful owing to sufficient caution exercised in identifying target groups. In addition, Uesugi et al. (2006) drawing from Japanese experience, find that a guarantee scheme can be sustainably run if it attracts low-risk firms or highly profitable high-risk firms.

4 Conclusion

Scholars seldom agree on whether SME oriented intervention is warranted because some group downplay intensity of the problem and claim the market will take a corrective action, while others contend that unless mechanisms are devised targeted at ameliorating the constraints, SMEs financing problem will remain unresolved. This paper shows that different mechanisms are suggested to mitigate SME financing problems, and they can be broadly classified into market mechanisms and schemes designed to curb the financing problem. While relationship lending falls into the first category, factoring, credit scoring, lease financing and credit guarantee are classified into the second group. Some of the schemes do not require state intervention while others necessitate active involvement of the state. The paper has brought to light controversies in literature and also provided evaluation on the feasibility of each scheme from a developing country perspective.

Relationship lending is considered as the panacea for SME financing troubles, but review of both theoretical and empirical studies revealed that its real impact on credit access, cost, and collateral requirement are less well understood. Controversial are its causal relation with SME credit access, cost of borrowing, and collateral requirement. In the face of all the controversies and based on the fact that dynamisms of the credit market can erode its potential benefits, we argue that this is not a reliable mechanism for easing SME financing problems.

While the rest of SME friendly financing schemes are designed to address the problems of opacity and lack of collateral, their efficacy is marred by absence of the financial, institutional and legal framework in most developing countries. For instance factoring is crucial as it allows a firm to obtain financing based on the creditworthiness of its customers. However, it demands legal framework, system of record keeping, and is not profitable in developing countries due to high degree of fraud. Similarly, credit scoring, despite its economic soundness for both the lenders and borrowers, it is difficult to run owing to high cost of technology, absence of credit information, and poor record management. Leasing appears to be relatively more feasible provided that there are firms engaged in the business operating in adequate number to avoid the potential development of monopolistic power-that leads to leasing services too costly for small firms to afford. Credit guarantees are designed to avert market imperfection, and are mostly administered by the government. While their role on easing small firm credit access is phenomenal, any unheeded subsidy may prove counterproductive.

In general, review of existing literature revealed the fact that not all the pro-SME financing schemes are suitable for SMEs in developing countries. This is because they demand development of legal, informational, and financial framework that the market acutely lacks at the moment. This, however, does not rule out the utility of schemes such as credit scoring that can run efficiently if well designed credit offices are in place. Considering their great potential in easing access, credit guarantee schemes are crucial as an interim solution.

References

1. Akhavein J, Goldberg LG, and White LJ 2004. Small Banks, Small Business, and Relationships:An Empirical Study of Lending to Small Farms. Journal of Financial Services Research, 26 (3):245-261.
2. Arping S, Lóránth G, and Morrison AD 2010. Public initiatives to support entrepreneurs: Credit guarantees versus co-funding. Journal of Financial Stability 6:26–35.
3. Bakker MH, Klapper L, and Udell GF 2004. Financing Small and Medium-size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe. Warsaw: The World Bank.
4. Beck T, Klapper LF, and Mendoza JC 2010. The typology of partial credit guarantee funds around the world. Journal of Financial Stability, 6:10–25.
5. Berger AN, and Frame WS 2007. Small business credit scoring and credit availability. Journal of small business management, 45:5-22.
6. Berger AN, and Udell GF 2006. A more complete conceptual framework for SME finance. Journal of Banking and Finance, 30:2945–2966.
7. Berger AN, and Udell GF 1995. Relationship Lending and Lines of Credit in Small Firm Finance. The Journal of Business, 68 (3):351-381.
8. Berger AN, and Udell GF 2002. Small Business Credit Availability and Relationship Lending: The Importance of Bank Organizational Structure. The Economic Journal, 112 (477):F32-F53.
9. Berger AN, Frame WS, and Miller NH 2005. Credit Scoring and the Availability, Price, and Risk of Small Business Credit. Journal of Money, Credit, and Banking,37 :191–222.
10. Berger A 1999. The 'Big Picture' of relationship finance, in "Business Access to Capital and Credit" (J. L. Blanton, A.Williams, and S. L. Rhine, Eds.), pp. 390–400. A Federal Reserve System Research Conference.
11. Berlin M, and Mester LJ 1999. Deposits and Relationship Lending. The Review of Financial Studies, 12 (3):579-607.
12. Blackwell DW, and Winters DB 1997. Bank relationship and the effect of monitoring on loan pricing. Journal of financial research, xx (2):275-289.
13. Boocock G, and Shariff MN 2005. Measuring the Effectiveness of Credit Guarantee Schemes: Evidence from Malaysia. International Small Business Journal, 23 (4): 427–454.
14. Boot AW 2000. Relationship Banking: What Do We Know? Journal of Financial Intermediation, 9:7–25 .
15. Bradshaw TK 2002. The Contribution of Small Business Loan Guarantees to Economic Development. Economic Development Quarterly, 16 (4):360-369.
16. Chemmanur T, Jiao Y, and Yan A 2010. A theory of contractual provisions in leasing. Journal of Financial Intermediation, 19:116–142.
17. Cole RA 1998. The Importance of Relationships to the Availability of Credit. Journal of Banking and Finance, 22:959-977.
18. Cole RA, Goldberg LG, and White LJ 2004. Cookie Cutter vs. Character: The Micro Structure of Small Business Lending by Large and Small Banks. The Journal of Financial and Quantitative Analysis, 39 (2): 227-251.
19. Columba F, Gambacorta L, and Mistrulli PE 2010. Mutual guarantee institutions and small business finance. Journal of Financial Stability, 6:45–54.
20. Cowling M 1998. Regional Determinants of Small Firm Loans Under the U.K. Loan Guarantee Scheme. Small Business Economics, 11(2):155-167
21. Craig BR, Jackson III WE, and Thomson JB. 2008. Credit market failure intervention: Do government sponsored small business credit programs enrich poorer areas? Small Business Economics, 30:345–360.
22. Deelen L, and Molenaar K 2004. Guarantee Funds for Small Enterprises: A manual for guarantee fund managers. ILO.
23. Degryse H, and Cayseele PV. 1998. Relationship lending within a bank-based system: evidence from European small business data. Department Economie Discussion paper series DPS 98.16. Katholieke Universtiet Leuven.
24. Deloof, M., Lagaert, I., and Verschueren, I. 2007. Leases and Debt: Complements or Substitutes? Evidence from Belgian SMEs. Journal of Small Business Management ,45 (4):491–500.
25. Detragiach E, Garella P, and Guiso L 2000. Multiple versus Single Banking Relationships: Theory and Evidence. The Journal of Finance, 55 (3):1133-1161.
26. Economist. 2009. Britain's credit-guarantee plan: Buddy, can you insure a loan?, The Economist, Weekly, January 15, 2009, Retrieved December 10, 2014, from The Economist: http://www.economist.com/opinion/displaystory.cfm?story_id=12932346andsource= login_payBarrier
27. Elsas R, and Krahnen JP 1998. Is relationship lending special? Evidence from credit file data in Germany. Journal of Banking and Finance, 22:1283-1316.
28. FCI. 2014. Factor Chain International Annual Review 2014, Retrieved on January 15,2015 from Factor Chain International URL: http://www.fci.nl/pdf/annual_review_2014.pdf.
29. Hancock D, Peek J, and Wilcox JA 2007. The repercussions on small banks and small businesses of procyclical bank capital and countercyclical loan guarantees. AFA 2008 New Orleans Meetings Paper. Available at SSRN: http://ssrn.com/abstract=973976 (Retrieved on January 4,2015).
30. Harhoff D, and Körting T 1998. Lending relationships in Germany: Empirical evidence from survey data. Journal of Banking and Finance, 22:1317-1353.
31. Hernandez-Canovas G, and Martinez-Solano P 2010. Relationship lending and SME financing in the continental European bank-based system. Small Business Economics, 34(4):465-482.
32. Honohan P 2010. Partial Credit Guarantees: Principles and Practice. Journal of Financial Stability, 6 (1):1-9.
33. IFC. 1996. Leasing in Emerging Markets. Washington DC: The World Bank.

34. Janda K 2008. Which Government Interventions are Good in Alleviating Credit Market Failures?. IES Working Paper: 12/2008. Charles University in Prague.
35. Kang JW, and Heshmati A 2008. Effect of credit guarantee policy on survival and performance of SMEs in Republic of Korea. Small Business Economics, 31:445–462.
36. Klapper L 2006. The role of factoring for financing small and medium enterprises. Journal of Banking and Finance, 30:3111–3130.
37. Kornai J 1979. Resource-Constrained versus Demand-Constrained Systems. Econometrica, 47 (4):801-819.
38. Kornai J, Maskin E, and Roland G 2003. Understanding the Soft Budget Constraint. Journal of Economic Literature, 41 (4):1095-1136.
39. Levitsky J 1997. Credit guarantee schemes for SMEs-an international review. Small Enterprise Development, 8 (2):4-17.
40. Lewis CM, and Schallheim JS 1992. Are Debt and Leases Substitutes? The Journal of Financial and Quantitative Analysis, 27 (4):497-511.
41. Marianne BP, Robb AM, and Wolken JD 2001. Financial Services Used by Small Businesses: Evidence from the 1998 Survey. 87 Fed. Res. Bull. 183 . USA.
42. Mester LJ 1997. What's the Point of Credit Scoring? Business Reveiw Septermber/October. Federal Reserve Bank of Philadelphia.
43. Myers S 1977. Determinants of Corporate Borrowing. Journal of Financial Economics, 5:147-175.
44. Nigrini M, and Schoombee A 2002. Credit guarantee schemes as an instrument to promote access to finance for small and medium enterprises: an analysis of Khula Enterprise Finance Ltd's individual credit guarantee scheme. Development Southern Africa, 19 (5): 735 - 750.
45. Ongena S, and Smith DC 2001. The duration of bank relationships. Journal of Financial Economics, 61: 449–475.
46. Ongena S, and Smith DC 2000. What Determines the Number of Bank Relationships? Cross-Country Evidence. Journal of Financial Intermediation 9:26-56.
47. Ono A, and Uesugi I 2009. Role of Collateral and Personal Guarantees in Relationship Lending: Evidence from Japan's SME Loan Market. Journal of Money, Credit and Banking, 41(5):935-960.
48. Petersen, MA, and Rajan, RG 1994. The Benefits of Lending Relationships: Evidence from Small Business data. The Journal of Finance, 49 (1), 3-37.
49. Petersen, MA, and Rajan, RG 1995. The Effect of Credit Market Competition on Lending Relationships. The Quarterly Journal of Economics, 110(2):407-443.
50. Riding, A. and Haines, G 2001. Loan guarantees: Costs of default and benefits to small firms. Journal of Business Venturing, 16(6):595-612.
51. Riding, A., Madill, J., and Haines, G 2007. Incrementality of SME Loan Guarantees. Small Business Economics, 29:47–61.
52. Sopranzetti, B. J. 1999. Selling accounts receivable and the underinvestment problem. The Quarterly Review of Economics and Finance, 39:291–301.
53. Sopranzetti, BJ 1998. The Economics of Factoring Accounts Receivable. Journal of Economics and Business, 50:339–359.
54. Soufani, K 2002. On the determinants of factoring as a financing choice:evidence from the UK. Journal of Economics and Business, 54:239–252.
55. Soufani, K 2000. The role of factoring in financing UK SMEs:A supply side analysis. Journal of Small Business and Enterprise Development, 8(1):38-46.
56. Udell, GF 2008. What's in a relationship? The case of commercial lending. Business Horizons, 51:93–103.
57. Uesugi I, Sakai K, and Yamashiro GM 2006. Effectiveness of Credit Guarantees in the Japanese Loan Market. RIETI Discussion Paper Series 06-E-004.
58. Vogel RC, and Adams DW 1997. The Benefits and Costs of Loan Guarantee Programs. The Financier, 4 (1and2):22-29.
59. Wendel CB, and Harvey M 2006. SME Credit Scoring: Key Initiatives, Opportunities, and Issues. Access Finance. The World Bank.
60. World Bank 2008. Leasing in Developing Countries: IFC Experience and Lessons Learned. Access Finance 23. The World Bank.
61. Zecchini S, and Ventura M 2006. Public Credit Guarantees and SME Finance. Working paper no. 73. Istituto di Studi e Analisi Economica.
62. Zecchini S, and Ventura M 2009. The impact of public guarantees on credit to SMEs. Small Business Economics, 32:191–206.