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Financing the SME Value Chains

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Abstract

This research work is built upon case studies from Malaysia and India and surveys conducted on the supply and demand of SME finance in Malaysia. Addressing SMEs' needs for finance, it is assessed that formal financial lending organizations represent a weak link in the financial supply chain for SMEs in the region. A lack of collateral and limited access to venture and growth capital are some of the obstacles that SME owners face when seeking finance for their businesses. This lack of affordable financing options stymies the growth of SMEs in Asia.

This work classifies nine areas of demand for SME capital and suggests that banks in the region need to redesign their lending portfolios to better evaluate and manage the SME's needs for finance. To help clarify the risks, this paper shows how the different sources of SME financing could be weighted with the so-called 5Cs framework viz. capacity, capital, character, collateral and condition. It suggests that the lending organizations should adopt more innovative ways to analyze SME loans, and gain a deeper understanding of how these enterprises fund their supply chains. Eleven key devices or mechanisms are discussed to leverage the lending process.

Keywords: Supply Chain Finance, 5C-Framework, Innovative lending, SME Value Chains

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EXECUTIVE SUMMARY

Asia's economic miracle is often associated with large, multi-national companies. While these organizations have been important drivers of the region's growth, small and medium enterprises (SMEs) accounting for more than 98% of the enterprises have played a key role. These SMEs contribute around 40% to their country's GDP in the ASEAN region. In developed nations such as the USA, UK, France and Singapore, SMEs contribute more than half of their country's GDP.

Addressing SMEs' needs for finance, it is assessed that formal financial lending organizations represent a weak link in the financial supply chain for SMEs in the region. The problem also hinders the physical supply chain in that SME's are key drivers of business growth in the region. This paper proposes a framework for financial lending to allow formal lending organizations to compete with the alternate sources of finance SMEs seek.

This research work is built upon case studies from Malaysia and India, and surveys conducted on the supply and demand of SME finance in Malaysia. A lack of collateral and limited access to venture and growth capital are some of the obstacles that SME owners face when seeking finance for their businesses. Cash flow shortages caused by long or delayed payment cycles exacerbate the problem. On the supply side, a number of issues including high transactions costs, inadequate information about borrowers and weak governance, deter large banks from developing SME lending portfolios. In the absence of bank lending options many SMEs turn to other sources of finance such as unregistered money lenders that charge high interest rates. It is realized that the local money lenders are accessible and understand the SME business model better. They are also able to keep a tight rein on costs and have developed ways to make sure that investment funds are used by borrowers for profit-making purposes.

The case studies provide insights for example on how the dairy sectors SMEs borrow money to buy animals, and the lender makes the payments directly to the seller to ensure that the funds are used correctly. In addition, SMEs can arrange for their customers to pay the lender directly so the loan is serviced as agreed. Banks generally lack this type of expertise and local knowledge. In addition, they often perceive SME customers as too risky, lacking in transparency, and poorly organized.

Yet the demand for financing from the SME business sector in Asia is huge. This work identifies nine areas of demand for capital, including funds to pay for fixed assets and raw materials, to pay for seasonal periods of low demand, and to ramp up operations ahead of product launches.

In addition to money lenders, SME's typically use eight types of financing options including family and friends, micro finance institutions and owner's equity. There are also various government schemes to help SMEs find the financing they need, but the research finds that that penetration is a key challenge to these interventions. These programs only reach a relatively small fraction of the total population of businesses.

The lack of affordable financing options stymies the growth of SMEs in Asia. This work suggests that banks in the region need to redesign their lending portfolios so that they are better able to evaluate and manage the SME's needs for finance. To help clarify the risks, this paper includes a grid showing how the different sources of SME financing are weighed in terms of the so-called 5Cs: capacity, capital, character, collateral and condition. It is recommended that banks should adopt more innovative ways to analyze SME loans, and gain a deeper understanding of how these enterprises fund their supply chains.

This does not necessarily require a complete overhaul of current practices; financial institutions can tap into the SME market by learning to work within current financing systems. To this end, MISI describes 11 key devices that can be leveraged to catalyze the lending process. For example, Joint Liability Groups comprise farmers with compatible businesses who come together to borrow from financial institutions. Group members can borrow individually or collectively by offering mutual guarantees for each other. Technological advances such as the growth of internet banking and electronic funds transfers can also be harnessed to facilitate SME lending. New standards such as the Bank Payment Obligation (BPO) rolled out by SWIFT and the International Chamber of Commerce (ICC) are helping to unlock IT-related advances in banking.

With mass customization and fragmentation of manufacturing, creating a viable market for SME financing benefits both the financial institutions and the enterprises involved. Regional and global supply chains also benefit in that there is an increasing need for sustainable and financially viable SMEs in Asia. This work thus addresses the factors responsible for widening the supply–demand gap for SME finance by studying the flow of finance through SME supply chains.

INTRODUCTION AND BACKGROUND

As the backbone of many economies across Asia, SMEs have been the key drivers of the remarkable growth that the region has achieved over recent years. More importantly, these enterprises will continue to play an important role in Asia's economic renaissance. It is estimated that SMEs comprise more than 98% of the number of enterprises in the Asia-Pacific region. The sheer number of SME organizations is not the only reason why they are important to Asia's prosperity. SMEs promote business ownership and entrepreneurial skills. They can be agile, adapting quickly to shifts in supply and demand; attributes that are particularly important in today's volatile global markets. In addition, SMEs are engines for job creation.

SMEs contribute more than half the country's GDP in developed nations such as USA, UK, France and Singapore. In developing countries such as India, China, Brazil, and Russia, they account for around 40% of the GDP. Overall SMEs generate the largest number of employment opportunities, second only to agriculture playing a pivotal role in the social and economic well-being of their host countries. However, the overall development of SMEs is constrained by challenges within the system. The most prominent of these being finance, infrastructure, market and technology. Hence it is necessary to promote SMEs through all possible means including policy initiatives, infrastructure development, and availability of finance, legal protection, and access to markets.

In an increasingly uncertain and complex business environment, understanding and managing the flow of finance through respective supply chains is a critical capability for all companies regardless of their size. This is particularly true for SMEs as they compete on scope instead of scale, which requires an adaptable supply chain. This is a challenging task for SMEs that are limited by resources and the understanding needed to acquire the skills essential for designing, building, and managing an advanced supply chain; factors critical for their survival. For example, SMEs have a difficult time accessing and understanding their capital requirements and managing finances effectively internally and across the boundaries of their enterprise. Without a good understanding of currency fluctuations, trans-border transactions and associated costs, SME's struggle to compete. While larger companies capture efficiencies

by forming strategic alliances with core suppliers, SMEs are not equipped financially to enter into such partnerships.

THE LACK OF SME ACCESS TO FINANCE

The gap between SMEs and large firms with regard to financial access is significant. For example, the World Bank's Consultative Group to Assist the Poor (CGAP) showed that only around 32% of SMEs had received a loan from a financial institution, compared with 56% of large firms (Financial Access 2010).

International Finance Corporation's (IFC) 2010 stocktaking report on SMEs to the Group of Twenty (G20) - *Scaling-Up SME Access to Financial Services in the Developing World* - indicated that 45% to 55% of SMEs do not have access to loans from formal financial institutions in developing countries. This ratio increases to 65%–72% if informal SMEs and microenterprises are included. With restrictions and unavailability of finance, the creation, growth, and maturity cycle of SMEs undergoes a very rough ride. Most SMEs do not even make it through all the steps of these cycles.

When SMEs do not qualify for a formal traditional loan or credit card through a bank or lending organization, alternatives such as the local money lender tends to be the viable option for fast cash. Most money lenders being small are more flexible than formal lending organizations. There are fewer bureaucratic layers than a bank, and the loan amounts are not big. This demands a look into the credit rating system that lending organizations use to offer loans to SMEs traditionally.

LITERATURE REVIEW

CREDIT RATING – THE 5C FRAMEWORK

Most lending organizations use a 5C framework for credit decision systems viz. the Character of the borrower, Capacity to repay the loan, Capital, Collateral and Conditions of the business environment (Savery 1976, Galitz 1983, Rosenberg and Gleit, 1994).

1. **Character** represents the overall integrity of the borrower which includes the timeliness in fulfilling the obligations. Some banks may even look into the personal credit history of the key SME stakeholders.

2. **Capacity** represents the future earnings over expenses to repay the loans. Numerous financial benchmarks, such as debt and liquidity ratios could be used to evaluate the Capacity factor.

3. **Capital** can be represented by the owner's financial commitment in the business and the risk that one is willing to undertake.

4. **Collateral** represents the assets that the company pledges as an alternate repayment source for the loan.

5. **Conditions** represent the business environment in which the current SME business is operating. This takes into account current economic conditions and trends related to the SME business seeking the loan.

Literature shows that this framework has found most application in consumer and credit card loans (Orgler, 1970), where the researchers have used a survey base approach to generate the scores for a number of respondents for the 5Cs and applied a discriminant analysis to segregate the good and bad borrowers (Rosenberg and Gleit, 1994). An interesting phenomenon is the dynamic nature of the credit management. Though the decisions are mostly based on the static factors such as the present net value, current sales, etc. but the loan has to be repaid over a long period of time. Hence some researchers argue that the dynamic factors should also be taken into account while evaluating the creditworthiness and credit limits. It is also suggested that the other existing loans, cash flows, future events such as renewal of lease or dead line of contract should also be taken into account while making a decision.

Over the years, researchers have also applied a number of qualitative and quantitative models for effective decision-making in the fields of credit management (Chhikara, 1989; Ong, et al., 2005). Factors addressed include creditworthiness, credit limit, interest rates, time, and exit options in case of defaults. A number of existing tools and techniques such as discriminant

analysis, linear programming, dynamic programming, goal programming, markov chains, decision trees, and artificial intelligence based models are applied to assist the decision makers (West, 2000; Ong et al., 2005). The early applications of these tools are seen for evaluating the consumer credit worthiness and for credit cards. The literature also addresses the use of these techniques for agriculture lending or farm credit (Limsombunchai, et al., 2005). Decision makers prefer these tools due to the obvious increase in good loans and reduction in bad ones. Moreover the automation and anonymity provided by these tools help the decision makers build systems that can efficiently process a large number of applications without any prejudice (Rosenberg and Gleit, 1994). Additionally the high degree of control, less-hassle implementation of policy changes and reduction of experienced employees for application evaluation provided by these decision tools has attracted the decision makers (Galitz, 1983).

The main stream decision makers were generally using scoring models to grade the applicant based on some already existing criteria. The decision was made based on the overall score of the applicant. This kind of approach was used to judge whether an applicant is creditworthy or not. Mostly discriminant analysis is used to assist the decision makers. But the other decisions such as the credit limit, time period, etc. has not received much attention in the literature.

There is a dearth of literature addressing the bad loans or defaults. While the cases of default can be categorized into professional verses personal failure, these should be treated accordingly. The cases of professional failures result from losses in the business, lean sales period, seasonality, accidents, etc. and these should be dealt with by a different approach compared to the cases of personal failure such as fraud, volunteer default, misuse of the loans, etc. This is important because the cases of professional failure are where the borrower may be good and willing to re-pay the loan once recovered from the situation.

By incorporating flexibility or exceptions banks can help a situation arising from a business failure turn into a bad loan. This can help the borrower survive and fight back the external threats allowing a speedier recovery from situations such as depression. This will be helpful for the banks as well, as the administrative expense to recover from a bad-debt can be avoided. In addition, banks can build a long term relationship with the customer. On the other hand, the loans where the banks detect a personal failure should be dealt with accordingly.

METHODOLOGY

Based on the literature review along with expert opinions of the subject matter and experience of the researchers, initial insights were developed. These were then validated with a survey on the supply and demand of SME finance. This was complimented with case studies where issues surrounding finance in the SME supply chains, particularly access to finance, were scrutinized.

Given the diverse nature of the SME organizations, it is realized that there can be no single financing solution to meet all SME needs. This demands using innovative means to improvise the criteria used by the lending organization to assess the creditworthiness and suggest products appropriate to the needs of the borrowing SMEs. Building on the foundations of existing literature on credit rating, and insights gained from the survey and case studies, the primary SME needs and their respective sources of finance were identified.

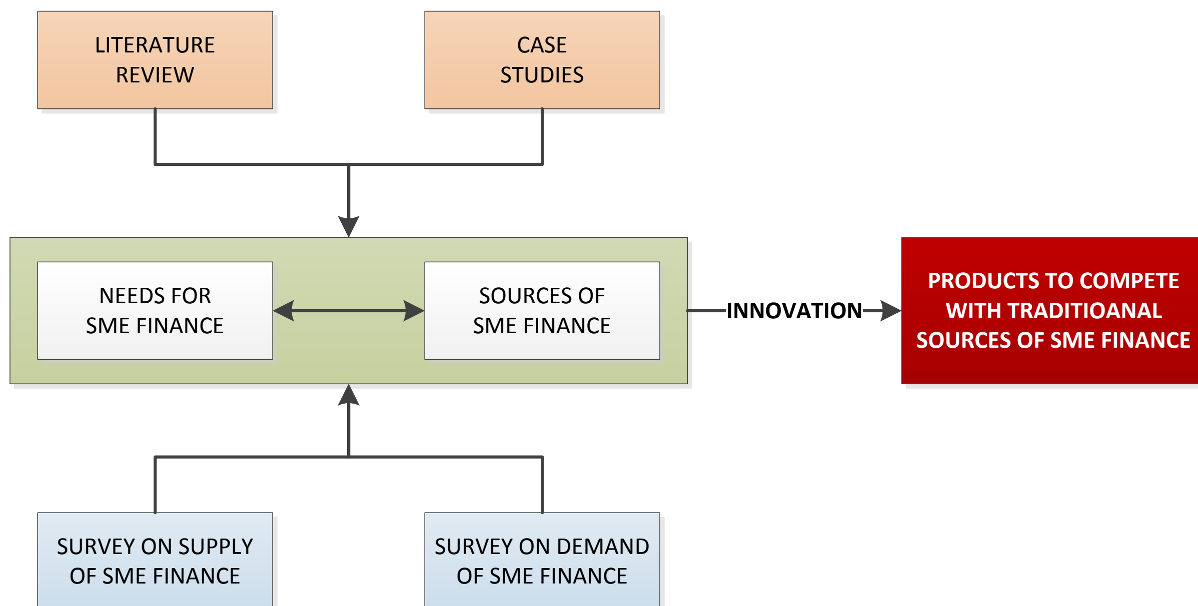

Figure 1: Research Methodology

CASE STUDIES

To understand the credit issues faced by the SMEs, a case study based approach was used. To understand diverse SME needs across various sectors a total of six case studies, one each in the area of agricultural and dairy farms, one in scarf manufacturing and three related to furniture were conducted. To understand the issues within a sector, small scale furniture manufacturers and suppliers were considered. These SMEs were visited and qualitative and quantitative data on a number of parameters was gathered. Semi structured interviews with the owners and key stakeholders in the SME organizations were conducted to understand the flow of finance and the supply chain challenges across the product life cycle as well as the life of the organization as it progressed from an initial to a more developed stage.

SME	Country	Sector	Description
Universal Scarf	Malaysia	Manufacturing	Procures cloth and other raw materials and manufactures scarfs. Supplies to the local distributors.
Teakita	Malaysia	Furniture	Sells furniture to customers directly. Has a vertically integrated Supply Chain.
Perabot Cramee Baru	Malaysia	Furniture	Procures furniture from suppliers and distributors with long term relationships and sells to the end customer.
Homepace	Malaysia	Furniture	Deals with wooden furniture accessories procuring directly from the manufacturers and customizing for the end customer.
Dairy Farmers of Andheri, Mumbai	India	Dairy	Purchases buffalo to produce milk and supplies to local retailers and household consumers.
Share Croppers of Varanasi	India	Agribusiness	Rents the agricultural land to produce food grains and vegetables to be sold at the local market.

Table 1: Case Studies

SURVEYS

To gain a better insight of the financial issues faced by the SMEs, we also conducted a supply and demand survey on SME finance by sending questionnaire to SMEs and lending organizations. The questionnaires were designed to help collect data on the financial needs of SMEs, their sources of finance, the implication of borrowing and conditions to maintain credibility within the lending system. 1,200 SMEs and twenty lending organizations in the Klang Valley in the greater Kuala Lumpur, Malaysia area were approached through the SME Corporation of Malaysia and the American Chamber of Commerce Malaysia.

INSIGHTS AND ANALYSIS

The case studies and survey provided meaningful insights to help develop a holistic approach to make SMEs more competitive in the global environment. A framework was developed whereby the lending organizations can enhance their existing offering using innovation as a means to compete with the alternate sources of finance the SMEs normally turn to.

The survey showed that while large enterprises in general tend to be more organized and have an established name and relationship with the financial institutions, the SMEs are perceived as risky, less transparent and less organized and mostly upcoming. The gap between SMEs and large firms on access to finance is much larger. This is in alignment with the International Finance Corporation's (IFC) 2010 stocktaking report on SMEs which indicated that 45% to 55% of SMEs do not have access to loans from formal financial institutions in the developing countries. This ratio increases to 65%–72% if informal SMEs and microenterprises are included.

It was realized that the SMEs give a higher priority to faster and hassle free loans and thus the subsidies on the interest rates are not the prime criteria to attract them for a loan application. SMEs expressed their dissatisfaction over the preference given to larger enterprises. The survey also showed that SMEs lacked information about the existing financial schemes and the alternative sources to SME finance. It is also realized that while segmenting the SMEs based upon the type of financial needs can be helpful in the credit rating, for overall sustainability and financial independence, the network of SMEs with the suppliers, customers, financial institutions and even the competing organizations needs to be stronger.

SME NEEDS FOR FINANCE

Insights from the survey and case studies reveal that SMEs identify financing, especially medium to long-term finance, as their foremost obstacle to growth and investment. SMEs encounter various needs throughout the product lifecycle and at the various stages of their organizations growth. These have been grouped into nine categories:

1. **Fixed assets** – to pay for the fixed assets to start any business SMEs need access to finance.

2. **Salaries and expense** – to run the business, operating expense and salaries are required in a timely manner.

3. **Utilities** – other than salaries need to be paid for in a timely manner

4. **Periodic fixed assets** – a business may require at every cycle a certain amount of investment in fixed assets.

5. **Low income period** – with seasonality and trend affecting the market there are low income periods for which the SMEs need to plan for.

6. **Emergency needs** – these can come up in the form of both personal and professional.

7. **Ramp-up** – this will require additional investments as increase in firm production ahead of anticipated increases in product demand will require making these investments upfront.

8. **Loan repayment** – the loans taken by the borrower need to be paid back in time.

9. **Raw material / working capital** – there is a continuous need for raw materials and working capital to run any business.

SOURCES OF SME FINANCE

SMEs meet these needs through the various sources of finance available. These sources are grouped into twelve categories and based on the 5Cs, the prime criteria for lending against these sources has been identified.

#	SOURCE	CHARACTER	CAPACITY	CAPITAL	COLLATERAL	CONDITIONS
1	ADVANCE (BUYERS/ CUSTOMERS)	▲				
2	CREDIT (SUPPLIERS)	▲	▲			
3	FACTORING		▲			
4	FAMILY AND FRIENDS	▲				
5	FINANCIAL INSTITUTIONS	▲	▲	▲	▲	
6	IPO/SHARES		▲		▲	
7	MICRO FINANCE INSTITUTIONS	▲	▲			
8	OWNER'S EQUITY			▲		
9	REGISTERED MONEY LENDERS	▲	▲			▲
10	UNREGISTERED MONEY LENDERS	▲	▲			▲
11	VENTURE CAPITALISTS	▲				▲
12	SALES/REVENUE		▲			

Table 2: SME Loans - Sources and Criterion

GOVERNMENT INTERVENTIONS

The survey also showed that the impact of special schemes by the government of Malaysia and for the overall development of the SMEs sector was perceived as positive. However SME "outreach" continues to remain a challenge and the support provided has not reached a large percentage of the existing SME population. Thus, a need exists to better manage the schemes to target the SMEs. Another critical role that can be played by the government is to train, implement and enforce financial regulations for SMEs to standardize their accounting procedures, thus helping the SMEs as well as the lending organizations. This can also facilitate the SMEs to list in the exchange markets for SMEs.

MATCHING SME SOURCES OF LOANS TO SME NEEDS

SMEs turn to these various sources of funding some of which may not be the ideal match given a specific SME need. These have been mapped in the matrix below as Table 3. A preferred matching is indicated by a "▲" and "▼" indicates an un-preferred match.

	SME SOURCES OF FINANCE	SME NEEDS								
		FIXED ASSETS	SALARIES	UTILITIES	PERIODIC FIXED ASSETS	LOW INCOME PERIOD	EMERGENCY NEEDS	RAMP-UP	LOAN REPAYMENT	RAW MATERIAL / WORKING CAPITAL
1	ADVANCE (BUYERS/ CUSTOMERS)		▲	▲	▼		▲	▲	▲	
2	CREDIT (SUPPLIERS)					▲		▲		
3	FACTORING		▲	▲	▼			▲		
4	FAMILY AND FRIENDS	▲	▼	▼	▲	▲	▲	▼	▼	
5	FINANCIAL INSTITUTIONS	▲	▼	▼	▲	▼	▼	▼	▼	▲
6	IPO/SHARES									▲
7	MICRO FINANCE INSTITUTIONS				▲	▼				
8	OWNER'S EQUITY	▲	▼	▼	▲	▲	▲		▲	▲
9	REGISTERED MONEY LENDERS				▲	▲		▼	▼	
10	UNREGISTERED MONEY LENDERS				▼	▲	▲	▼	▼	
11	VENTURE CAPITALISTS	▲								▲
12	SALES/REVENUE		▲	▲	▲		▼	▲	▲	

Table 3: SME Loans – Matching Sources to Needs

CHARACTERISTICS OF SME LOANS

The characteristics of these SME loans are summarized as below. When SMEs do not qualify for a loan or credit card, money lenders tend to be the sought after alternative for fast cash. Most money lenders being small are more flexible than formal lending organizations. There are fewer bureaucratic layers than a bank, and the loan amounts are not big. Using IT to reduce the time and effort in rating a loan application from the SME can help on issues such as credit rating.

#	SOURCE	COLLATORAL (Y/N)	ONE TIME OPPORTUNITY (Y/N)	TRANSACTION COST (Y/N)	INTEREST (H/M/L/N)	INTERFERENCE (H/M/L/N)
1	ADVANCE (BUYERS/ CUSTOMERS)	No	No	No	No	No
2	CREDIT (SUPPLIERS)	No	No	No	No	No
3	FACTORING	No	No	Yes	Low	No
4	FAMILY AND FRIENDS	No	Yes	No	No	Low
5	FINANCIAL INSTITUTIONS	Yes	No	Yes	Medium	No
6	IPO/SHARES	No	Yes	Yes	No	High
7	MICRO FINANCE INSTITUTIONS	No	No	No	High	No
8	OWNER'S EQUITY	Yes	Yes	No	No	No
9	REGISTERED MONEY LENDERS	No	No	No	Medium	No
10	UNREGISTERED MONEY LENDERS	No	No	No	High	No
11	VENTURE CAPITALISTS	No	Yes	Yes	No	High
12	SALES/REVENUE	No	No	No	No	No

Table 4: SME Loans - Sources and Characteristics

FACTORS RESPONSIBLE FOR BREAKING THE SME LOANS

With restrictions and unavailability of finance, the creation, growth, and maturity cycle of SMEs undergoes a very rough ride. Most SMEs do not even make it through all the steps of these cycles. The factors that these loans are sensitive to are listed as follows.

#	SOURCE	BREAKING FACTORS
1	ADVANCE (BUYERS/ CUSTOMERS)	Performance Failure
2	CREDIT (SUPPLIERS)	Commitment Failure
3	FACTORING	Commitment and Performance Failure
4	FAMILY AND FRIENDS	Character and Business Failure
5	FINANCIAL INSTITUTIONS	Character, Business and Market Failure
6	IPO/SHARES	Performance Failure
7	MICRO FINANCE INSTITUTIONS	Character and Commitment Failure
8	OWNER'S EQUITY	Business and Performance Failure
9	REGISTERED MONEY LENDERS	Commitment Failure
10	UNREGISTERED MONEY LENDERS	Commitment Failure
11	VENTURE CAPITALISTS	Business Failure
12	SALES/REVENUE	Performance Failure

Table 5: SME Loans - Sources and Breaking Factors

A FINANCIAL LENDING FRAMEWORK

It is realized that due to the lack of proper information about particular business, banks are unable to cater to the specific needs of the customers. Generally common financial products are designed to address the majority while neglecting a large number of creditworthy customers. These customers are forced to borrow at a higher market rate from the local money lenders, which leads them towards a dangerous debt trap. Discussions with large banks specializing in SME lending revealed a lack of trained manpower to assess business proposals from different SME sectors. On the other hand local money lenders have knowledge and insight into the financial cycle of the business and are therefore more informed in their decision making. Because local money lenders have a better understanding of the business, they manage to maintain close control on the overall utilization of the borrowed amount. They ensure that the money is used for the right purpose (e.g. profit making), so as to ensure a return on investment. This has the side effect of ensuring the creditworthiness of the borrowers.

There are several ways in which the local money lenders perform this job. One of the ways is to introduce the suppliers into the lending mechanism and directly pay for the materials purchased rather than providing cash loans to the borrowers. For example, in the dairy industry, if the dairy owner borrows money to purchase animals, the money lender makes the payments directly to the animal owners to ensure that the purchase has happened and there exists a profit making collateral against which the loan is secured and can be paid. A similar process exists to repay money lenders, whereby SMEs can have their customers make payments directly to the money lenders instead of indirectly via the SME. This business specific knowledge is lacking amongst financial institutions.

In such cases when SMEs lack the security required for conventional bank loans based on collateral, external stakeholders willing to provide collateral and assurances should be sought after and brought into the lending framework as supporters. This can be complemented with feasibility assessment allowing loans matching the business plan of the SMEs. The challenges of multiple stakeholders and information gathering and assessment can be eased through the use of information technology. The financial institutions should incorporate incentives for themselves and their customers into their products, services and contracts.

Taking an example of banana from the state of West Bengal India, it is perceived as a high value crop, having around three good fruit bearing seasons in two years. However, the farmers are unable to secure loans for growing bananas as it is perceived as a high risk crop susceptible to strong winds in the monsoon season. No insurance plan is available to support it, whereas insurance is available for growing alternate crops of jute, sugarcane and rice which follow a three to four month cycle. While the average land holding size in the region is about 2 Acres (0.8 Hectares), the local cooperative banks provide a loan of up to INR 15,000 per Acre for growing jute, rice or potato and up to INR 18,000 per Acre for sugarcane. These are offered at 12% simple interest with collateral. The financial strength of these cooperatives is very limited, the sources being the local deposits and the money borrowed from other banks at 9% per annum.

When documents are not available for using agriculture land as collateral, the cooperative banks allow loans to the Joint Liability Groups (JLGs) at 12% interest per annum for up to a limit of INR 20,000 per member in the JLG. As a next alternative farmers turn toward micro financing institutions in the same area, which offer loans at 26% annual interest. The final option for farmers is the local money lender who charges interest at the rate of 36% per annum.

There is a need to re-design the lending portfolio for banks, to assist in analyzing as well as monitoring loan applications. Before that we present a grid (see Table 6) to show how the different sources of SME financing weigh the 5Cs in making loans available to the SME. Weights are suggested on a scale of 1 to 5 for the formal lending organizations to adjust their products to meet the SME needs. The last column suggests the innovative means that can be used by banks to compete with traditional lending sources. Furthermore, it is discussed how the key traditional tools discussed earlier can be used to help facilitate the lending process. A discussion of the use of these new criteria as they relate to the case studies covered for each of the competing sources of SME lending is also discussed.

LEVERAGING TRADITIONAL TOOLS FOR INNOVATIVE LENDING

It is realized that among the many factors that drive SMEs away from the formal lending mechanisms, the lack of accessible and competing options with the traditional sources of finance through the formal lending mechanism is critical. The case studies also helped to

highlight the various devices currently being used by the many lending sources that SMEs turn to. By incorporating these strategies innovatively in the current offerings and improvising the evaluation criteria for SMEs' credit worthiness, many products matching SME needs can be offered competitively. Learning from the different ways SMEs fund their supply chains, we discuss eleven key devices (K1 through K11) that can be leveraged to help catalyze SME financing, both from a supply and demand perspective.

K1. **Joint Liability Groups (JLGs)** - A JLG is an example of horizontal collaboration where (for example) a number of farmers may form a group to borrow from financial institutions such as banks. These farmers have the same occupation such as agriculture, dairy, etc. and live in close proximity to each other. The members of the group are aware about others within the group and can rate the creditworthiness easily with minimum administrative costs. This helps in building community, trust and social safety net. The size of the group can be from four to twenty to keep it manageable. The members of the group can borrow individually or as a group by placing mutual guarantees for the members. We found that each season the JLG will prepare a loan application (a simpler version of the bank application) and apply to the banks. The banks process the application once they have verified the creditworthiness of individuals. The loans can be short term, long term or cash credits.

K2. **Factoring -** A mechanism to generate working capital by selling the future earnings such as invoices to financial institutions. The financial institutions pay the expected receivable after discounting. The risks with the delay or default of the payment are the responsibility of the financial institutions.

K3. **Reverse Factoring** - Reverse factoring works as an advance payment made by the buyers with the help of the factoring mechanism. In place of small suppliers taking individual loans from different banks, large organizations take out a loan (after negotiating with several banks) and distribute it among their suppliers. This reduces pressure and interest rates paid by the suppliers in order to help them become more sustainable and successful.

K4. **Moveable & Social Assets as Collateral** - Assets such as vehicles, machinery etc. termed as movable assets can be pledged as collateral to help the micro and small

enterprises lacking fixed assets in collateral. These accounts for around 70-80% of all the assets for micro and small enterprises. Traditionally banks did not find these appealing due to the lack of proper rating and policy environment especially in developing countries. Similarly while social capital has always played a role it was never considered a key factor to judge the creditworthiness of a borrower. In the current scenario, financial institutions do lend based on the recommendations of established agencies. For example, on recommendation, financial institutions can provide credit to the suppliers of large organizations. In the era of online business, where a lot of transactions happen over the internet, financial institutions can consider taking websites, Facebook pages, and LinkedIn contacts as collateral. Banks can take the ownership of the domain or guarantees from the third-parties hosting an SME website as collateral for businesses that get customers via the internet. For example, various hotels are listed through third party web sites specialized in hotel booking. These third parties can act as guarantors to the banks allowing potential access to block or suspend the access to the hotel booking service. This mechanism needs to be further explored for its full potential. However, including these assets will open new doors for the lending organizations for potential borrowers.

K5. **Credit Cards** - In order to bring the micro and small enterprises into the formal financing system banks can anticipate the seasonal business and emergent needs of these businesses. Banks can provide credit cards to these enterprises specifically for these purposes. This can avoid the unnecessary administration cost at the time of an emergency and facilitate the overall lending and documentation process.

K6. **Insurance** - There are a lack of products that could provide for non-business needs of the larger SMEs. Where products such as medical insurance, crop insurance, and animal insurance exist, SMEs need to be educated to benefit from such products. Considering emergency business and personal needs such as accidents, natural calamities, etc., SMEs and their assets need to be properly insured.

K7. **Team Loans or Peer-2-Peer Lending -** This is an age-old system where a few people join as a group and contribute a fixed amount every period. The needy members make an open bid every period and the one with the lowest gets his amount. In the next periodic meeting, all members, except those who have already availed once are eligible

for bidding. This system has emerged as an easy and transaction free source of money. In some cases the members have to pay a high interest if they bid for too low an amount. There can be defaults if some of the members don't pay at the periodic meetings after availing the collection. Thus there is scope for formal financial institutions to formalize this process and to make it less risky. All the players may be required to be enrolled as bank customers, and the bank can then facilitate the forming of groups by matching the appropriate players together for team lending.

K8. **Information Technology** - Among the many innovations, the ubiquitous adoption of credit cards, electronic funds transfer (EFT) and internet banking as important applications of technology has played a key role in the transformation of the financial sector. It is important to realize that financial service providers have traditionally been the early adopters for most cutting-edge technologies, being that innovation in IT generally relates to innovation in financial services. This is substantiated by the higher percentage on IT spending in the financial services industry as compared to other industries in general. While on average, across all sectors polled, IT costs were equivalent to 3.7% of revenues, banks' expenses for IT equal 7.3% of revenues, in a large survey covering firms in the Americas, Europe and Asia (Forrester 2012). McKinsey sees banks' IT costs at 4.7% to 9.4% of operating income (McKinsey 2012). According to the Gartner Group, financial services are the most important industry for the IT services suppliers, representing 19% of the total market (Gartner 2009). This symbiotic relationship between financial services and IT reinforces the need for continuous search for new solutions.

In Q2 2013, the International Chamber of Commerce (ICC) and SWIFT rolled out new industry-owned legal rules and technology standards for supply chain finance. These will help unlock the real potential of the Supply Chain Finance market. While these standards enable banks to provide their corporate clients with Supply Chain Finance services as from the very start of trade transactions, it offers local banks and development banks an opportunity to increase their role in supporting a vital segment of the economy, i.e. the SME market. This innovation known as the Bank Payment Obligation (BPO) offers buyers and suppliers a new payment method to secure and finance their trade transactions. "The new BPO trade settlement instrument is an efficient way to extend export financing to SMEs in Asia and we trust this new

mechanism will contribute to increasing support to this vital segment of the economy"[1] (SWIFT White Paper 2013).

K9. **Creating New Opportunities for SME Inclusion** - Financial inclusion implies providing access to the formal financial system and services such as savings, payments, transfers, credit and insurance. A broad range of affordable, quality financial services and products need to provide to the SMEs. A good understanding and knowledge of SMEs can lead to the design of products and channels suited by the customer. For example SMEs can be allowed to enroll for a one-time bail out product with conditions.

K10. **Relational Lending** - This is possible as banks are capable of providing value added services and can help facilitate programs to overcome information asymmetry. Studies have revealed that small business owners do not see their bankers as a source of financial advice. Hence banks can distinguish themselves from their competitors by providing business advice to their customers whereby they will be assessing the market conditions in which their SME borrowers are running their businesses.

K11. **Intervention through Public Private Partnerships** - Certain value chains can be very complex. Dividing the areas of responsibility according to core competencies, resources and mission among the participating public and private partners is a good way can help strengthen the infrastructure services delivery to facilitate market access and reduce the overall cost of doing business. This is very conducive to SME business environment.

The mechanisms and tools presented above highlight their character and uses. However in real life they are used in combinations and therefore the formal financial institutions need to look into these to create conventional and unconventional financial tools and options for SMEs. These are discussed in the next section.

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[1] Steven Beck, Head of Trade Finance at Asian Development Bank (ADB) and Member of the ICC Banking Advisory Board and of the WTO Working Groups for Trade Finance.

PRODUCTS FOR SME VALUE CHAINS

The effective design of lending products and strategies to SMEs can contribute to the overall growth and profitability of the lending organizations as well as the borrowers.

Table 6 shows a framework that can be used as a guideline by the lending organizations for SME lending. A normal weight of five points is assumed against the 5C's which are traditionally used for evaluation of creditworthiness. These five points are distributed across the 5C's for a particular source of SME borrowing as shown in the first set of columns. The difference from the formal financing institutions (1-Trade Wt.) is calculated in the second set of columns. Finally in the third set of columns we propose weights to the 5Cs for formal financing institutions to compete alternate sources of SME Finance. The last column suggests the key tools discussed earlier that can be used to complement the suggested weights. These tools or techniques can help offset some of the additional costs that will be involved when the lender organizations give way from their traditional criteria for SME lending.