Small and Medium-Sized Enterprises Lending Approaches: The Role of Banks in Asia
**About this series**

Micro, small and medium-sized enterprises (MSME) make a significant contribution to economic growth and job creation across Asia and the Pacific. However, they often encounter difficulties in accessing finance. Women-headed MSME’s are particularly underserved by financial institutions due to economic, regulatory and socio-cultural factors. In recent decades, governments and related agencies have set up mechanisms to facilitate the flow of finance. The result has been an increase in financial inclusion but the extent to which the financing gap has been reduced is not well known.

To gain more understanding about this issue, key questions need to be addressed, including the following: Is finance still a constraint, including for certain classes of enterprises, such as medium-sized ones? What mechanisms, such as credit guarantees, collateral support, and directed credit, have been the most beneficial in closing the gap? Is there gender disparity in access to finance? And are there public and/or private sector measures to overcome any existing regulatory, normative and contextual barriers to women entrepreneurs’ equal access to finance? How have demand-side programmes, such as financial literacy, aided MSMEs? And how have FinTech and digital finance helped to increase access to finance?

To seek answers to these and other important questions, the Economic and Social Commission for Asia and the Pacific (ESCAP) developed *A Framework for Country Studies on MSMEs Access to Finance in Asia and the Pacific*. The Framework provided direction for the preparation of detailed national studies on MSMEs’ access to finance in selected countries of Asia and the Pacific. The studies were prepared by researchers and specialized consultants under the guidance of a lead country agency with policy responsibilities in MSME financing. In some of the studies, an advisory committee composed of representatives from departments, agencies, financial institutions, and organizations involved in MSME promotion and financing provided direction and support to the authors.

This series presents the Framework along with national studies that were prepared following its guidelines. Each national study is expected to contribute, through policy analyses and recommendations, to policy discussions on how to improve access to finance by MSMEs. The preparation of national studies based on a common framework is also expected to facilitate comparisons across countries to share experiences, identify good practices, and understand common challenges.

Some of the studies contributed to ESCAP capacity building projects. The studies for Cambodia and Nepal were funded by the United Nations Regular Programme of Technical Cooperation, and the studies for Bangladesh and Samoa were funded by the Government of Canada, through Global Affairs Canada, in the context of ESCAP’s Catalysing Women’s Entrepreneurship Programme. The preparation of these four studies benefitted from a partnership between ESCAP and the United Nations Capital Development Fund (UNCDF). The latter contributed financial support for the Nepal study through UNNATI-Access to Finance (A2F) Project funded by the Government of Denmark.

In addition to the country studies, the series includes two thematic studies on ways in which commercial banks and digital technologies can contribute to improving access to finance by MSMEs. These studies were prepared for the Global Initiative Towards the post-Covid-19 Resurgence of the MSME Sector, a joint United Nations Development Account project implemented by multiple agencies.
About this report

This report was commissioned by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and was prepared by David Munro.

The report was funded by a joint project implemented by UNCTAD, UNDESA and the UN regional commissions entitled "Global Initiative Towards the post-Covid-19 Resurgence of the MSME Sector." The project aimed at building capacities of governments, financial institutions, and micro, small and medium-sized enterprises (MSMEs) to facilitate the latter's recovery from the Covid-19 pandemic. In the context of this project, ESCAP prepared training materials on various areas related to MSME financing.
Contents

About this series

About this report

Abbreviations

Glossary

Acknowledgements

Overview and key messages

1. Introduction

A Brief History of Payments

Bank SME Financing

2. Characteristics of SMEs and the Challenges They Present to Traditional Bank Lenders

Microfinance

SME Finance

3. Fundamentals of a Successful SME Lending Program

The Necessity of Establishing Creditworthiness

Credit Scoring

Cash-Flow-Based Analysis and Approval Regimen

The Need for Cost-Effective Analysis and Approval Protocols

4. Components of a Lending Program

Clear Eligibility Requirements

Sound Loan Documentation

Loan Product Offerings

The Analytical Framework: Online Application and Approval Process

Submission of Financial Statements or Creation of Financial Statements

Sources of Credit Information

Loan Guarantees

Policy Issues: How Government Policies May Incentivize Commercial Bank Lending to SMEs

Portfolio Management Issues/Risk Management Concerns, Including Follow-Up, Monitoring and Past Dues Management

Security and Collateral

Common Shortcomings of SME Lending Programs – Things to Avoid

A Note on Marketing an SME Lending Program

i

ii

v

vi

viii

ix

1

1

2

3

3

3

6

6

8

9

9

10

10

10

11

11

12

19

20

21

23

23

24

25
5. SME Lending in Asia ........................................................................................................................................ 25
   Three Exemplary Banks ................................................................................................................................ 26
6. Conclusion ......................................................................................................................................................... 32
Annex: Bank Responses to Queries Regarding their Lending Processes .......................................................... 35
Abbreviations

ADB  Asian Development Bank
BPMS  Business process management software
CAR  Capital adequacy ratio
CGC  Credit guarantee corporation
CIB  Credit information bureau
CoGS  Cost of goods sold
CRM  Credit risk management
DFC  Development Finance Corporation (US)
EBRD  European Bank for Reconstruction and Development
EMDEs  Emerging market developing economies
ESCAP  United Nations Economic and Social Commission for Asia and the Pacific
FY  Fiscal year
GDP  Gross domestic product
ICRRS  Internal credit risk rating system
IFC  International Finance Corporation
JASME  Japan Agency for SMEs
KODIT  Korea Credit Guarantee Fund
METI  Ministry of the Economy, Trade and Industry
MSME  Micro, small and medium-sized enterprises
NGO  Non-governmental organisation
NPL  Non-performing loans
OECD  Organisation for Economic Co-operation and Development
RO  Relationship officers
SBA  Small Business Administration
SME  Small and medium enterprises
SOD  Secured overdraft
UNDP  United Nations Development Programme
USAID  United States Agency for International Development
| **Glossary** |
|-------------------|--------------------------------------------------|
| **Asset-based lending** | A lending protocol which relies upon collateral as a source of ultimate repayment and does not feature analysis of financial statements. |
| **Cash cycle** | Also known as the “cash-to-cash cycle:” Following cash flows from purchase of raw materials, through production of goods, to collection of accounts receivable. |
| **Cash flow** | Sources and uses of cash as determined for a stated period (a year, for example) where the income statement is used to connect starting and ending balance sheets. The all-important figure “cash from operations,” the net amount of cash generated from the operating period under review, is the result. |
| **Cash-flow-based clean-up** | To repay all outstanding borrowings under a line of credit for a stated period of time. |
| **Collateral** | Pledge of physical assets to the lender as a form of security. |
| **Credit analysis** | Extraction of cash flow to determine whether and when a business can repay a loan. |
| **Current assets** | Assets with a life of less than one year. |
| **Current liabilities** | Liabilities with a life of less than one year. |
| **Fixed assets** | Property, machinery and equipment with a useful life of a year or more. |
| **Float** | The interval between the time a bank or financial institution receives monetary credit and the time it credits the ultimate beneficiary. |
| **Grace period** | A period in which the borrower is not required to repay his loan, perhaps six months, after which instalments become due on a monthly or quarterly basis. |
| **Leverage** | The amount of debt supported by the capital base, expressed in the ratio. |
| **Loans to deposits ratio** | Total Loans/Deposits. Generally, should be 80-95%. |
| **Plug** | A figure used to make an equation work, or in the case of a balance sheet, make it balance, as in the equation Assets – Liabilities = Owner’s Equity. |
| **Ratio analysis** | The use of financial ratios to measure and reveal important aspects of
a firm’s income statement and balance sheet.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spread</td>
<td>The difference between the interest rate charged and the cost of funds. In other words, the lending institution’s profit.</td>
</tr>
<tr>
<td>Value proposition</td>
<td>A combination of products and services dedicated to a distinct group of borrowers, generally based upon the profitability of their accounts to the bank and used as a marketing tool.</td>
</tr>
<tr>
<td>Working capital</td>
<td>Current Assets – Current Liabilities. The assets and liabilities which are directly involved in the production cycle.</td>
</tr>
</tbody>
</table>
Acknowledgements

The author of this report would like to express his gratitude to Mr. Syed Abdul Momen, Head of SME Banking, BRAC Bank, and Ms. Ullumbayar Enebish, Chief Operations Officer, XacBank, for taking the time to complete the questionnaire sent to them as well as to Alberto Isgut, ESCAP, for his suggestions, encouragement, and thoughtful edits of this text. This report was edited and formatted by Luciana Milani Baglioni and Patchara Arunsuwannakorn. Latipat Mikled provided effective research assistance.
Overview and key messages

SME Lending should never be confused with microfinance. At the other end of the lending spectrum, SME lending also differs from corporate lending - primarily for the additional risks it presents. This paper outlines the risks to the lender and offers practical approaches for their mitigation. At the centre of the “solution” is a firm reliance on sound credit analysis, and how lack of financial information may be rectified. In an age of alternative sources of finance, the paper explores algorithm-based platforms, describing both their strengths and their weaknesses. A “third way” is proposed, which combines traditional financial statement analysis with a semi-automated approach. Key to the proposal is retaining adequate analytical rigour while cutting costs to the lender and enabling fast turn-around time for SME loan applicants. The elements of a successful SME lending program are described in detail, including loan products, monitoring, regulatory issues, the role of loan guarantees, and marketing recommendations. The paper concludes by examining how three Asian banks, each a leader in its market, have made SME lending an integral part of their respective missions.
1. Introduction

The purpose of this paper is to explore the “fit” between small-medium-scale enterprises’ borrowing needs and creditworthiness, commercial banks' financing capabilities, and risk appetite and mitigation requirements. The bulk of the paper is devoted to lending approaches - protocols and methodology – how commercial banks may maximize the advantages they bring to the table as SME lenders while ensuring that credit risk is reduced to manageable proportions. The paper is written with Asian countries and markets in mind.

The development “press” over the past few years has been filled with stories of alternative lending sources, of Financial Technology (Fintech) firms and other entrants to the SME lending space providing faster, less intrusive access to credit; nevertheless, there remains a strong argument for banks to be actively involved – both from the banks’ as well as the beneficiaries’ points of view.

A Brief History of Payments

For purposes of framing our discussion, let’s examine why Fintech firms have been successful in invading the SME lending arena. Many SMEs lack elements commercial banks deem essential to be considered for credit extension:

- Financial statements
- Collateral
- Sufficient “track record” and proven management
- And there are high transaction costs

Fintech firms often substitute the enterprise credit risk with that of the owner or principal, who is required to personally guarantee loans. They are able through personal credit checks to determine whether or not the owner is broadly creditworthy. In the case of “psychometric testing,” the borrower’s personality traits are measured as a replacement for or adjunct to credit scoring (Insider, 2017). Fintech firms frequently offer only short-term advances or non-revolving lines of credit (which require payment of the first tranche in full before additional borrowings can be taken). Some do offer revolving credits, and some provide term loans, although tenors are relatively short and - given the high-interest rates - term borrowing from fintech firms is expensive. Repayments are weekly or monthly, and interest rates are exorbitant – as high as 10%/month, which amounts to 120% annually.¹ The advantages are speedy application time (as little as 15 minutes) and swift approvals. These firms rely upon credit-scoring algorithms rather than traditional credit analysis. Often their entry into the SME lending market is as an adjunct to their main line of business which in the case of such firms as Alibaba is online retailing through which they develop large databases of payment information on potential borrowers. They also benefit from a certain amount of “float” generated by the time taken for funds from online sales to be paid to the ultimate suppliers.²

While the benefits of obtaining financing via Fintech platforms are undeniable, there are also disadvantages – prominent among them the very high cost of borrowing – which banks are in an excellent position to reduce if only their basic credit concerns can be addressed.³

¹ On Deck charges an annual interest rate of 42.5% according to its website (see https://www.ondeck.com/).
² For an account of Amazon’s and Alibaba’s entry into the SME lending arena, see So (2019).
³ For a description of the high-interest rates often charged, see Palladino (2020).
Bank SME Financing

What advantages do banks bring to the SME finance table?

- Financial expertise, including knowledge of how to assess creditworthiness
- A range of financial products from deposit services to credit cards, leasing, factoring, foreign exchange, and letters of credit, to name just a few
- Online platforms through which to access products and services
- Branch networks, which provide banks with a local presence and knowledge of the business community. In locales where online services are rudimentary, branches afford customers a convenient means of conducting their banking business
- Trained credit officers who can serve as advisors/mentors to fledgling SMEs
- In cases where Fintech lenders lend to the owner, banks offer business loans to the SME itself, allowing the enterprise to establish its own credit standing

The country's overall economic development level in which a bank operates will dictate which element(s) listed above are predominant factors in guiding its approach to the SME market. In an advanced economy such as Singapore’s, for example, the leading bank DBS relies to a considerable extent on its online lending platforms. In Bangladesh and Mongolia, by contrast, branch networks are more important. This paper will discuss each of these specific environments in greater detail below.

From the bank’s standpoint, SMEs provide advantages as well. Small local banks run a considerable risk of asset concentration, particularly in communities which are dominated by a single industry (or even a single firm). Concentration is the banker’s enemy, whether it be in the form of borrowers, depositors, or shareholders. SME lending is a fairly easy method of diversifying the lending portfolio, and helps banks achieve a broad but shallow loan portfolio that is less susceptible to disruption through setbacks affecting one specific industry or another. In addition, SME loans are small-ticket items. Default by one borrower will not have a spillover effect, cause catastrophic dips in the bank’s profits or threats to its solvency.

Once banks achieve a workable solution to the particular challenges SMEs pose (see below), these firms are likely to remain dependable, loyal customers, providing cross-referrals and a good deal of repeat business. Banks can explore value-chain financing - capitalizing on the SMEs’ positions in value chains as suppliers, manufacturers or distributors.

SME lending is a means of sustaining profitable branch operations in an age increasingly dominated by online banking. As noted above, branches also afford the bank valuable insights into local firms and their place in their community’s commercial environment. This, in turn, is a source of credit information, helping the bank make better lending decisions. To the extent that banks are able to perform their “mentor” function, the benefits of having a knowledgeable branch loan officer can well outweigh the relative speed and convenience of online banking platforms.
2. Characteristics of SMEs and the Challenges They Present to Traditional Bank Lenders

Microfinance

Before discussing SMEs in detail, it is vital to point out what they are not. Above all, they are not microenterprises. Microenterprise lending is an area of specialization apart from the worlds of SME and corporate lending. The term “MSME lending,” to this author, is an oxymoron. Microfinance operates under its own set of rules, adapted to the attributes that characterize microenterprises—but not SMEs. Microenterprises in general:

- Are part of the Informal economy. They are unregistered and largely unregulated
- Are family businesses
- May have no fixed address
- Have no employees (only family members)
- Have no operating expenses, such as rent (they operate from the owner’s home)
- Have no fixed assets
- Make no discrimination between personal and business expenses
- Have no financial records or bank accounts

Microfinance employs specific strategies to meet the requirements and mitigate the challenges posed by this clientele, to wit:

- There is generally no credit analysis process whatsoever. Loans are extended based on the borrower’s character (their reputation). Only a notional familiarity with the borrower’s finances is obtained (usually nothing beyond weekly or monthly sales and cost of goods sold estimates)
- Loans are for very small amounts and very short tenors
- Repayments are often weekly
- Lending is labour intensive. Officers make frequent collection visits, and otherwise, maintain very close contact with their customers resulting in extremely high transaction costs to the lender
- Group lending is an approach used by many microfinance organizations

SME Finance

SMEs, by contrast, while they may lack financial statements, likely maintain rudimentary financial records from which pro forma statements may be prepared. They are often registered with local regulatory offices, including tax authorities. Many SME lending programs require that borrowers be registered entities. While many are family businesses, a considerable number are not. They have fixed business addresses and employ non-family members, even managers. They pay rent and
employees earn wages. They participate in social insurance schemes. In short, they are a higher order of enterprise from both the organizational and operational standpoints. It is unusual to encounter enterprises which do not separate business expenses from the personal expenses of the owners.

With these baseline structural and operational distinctions in mind, SMEs are much more attuned to commercial banks’ requirements for normal lending operations. SMEs, in other words, bear a closer resemblance to corporate borrowers than to microenterprises. As a general rule, banks are not in a position to monitor borrowers on a weekly, much less a daily, basis, as is often the practice with microfinance NGOs. SMEs can be expected to abide by monthly repayment regimens, often require fixed asset financing (loans with longer tenors), and can be dealt with more at arm’s length than is advisable with microenterprises.

Part of the challenge of SME lending is to help small enterprises grow in managerial and operational competence by maintaining better records (ultimately producing actual financial statements), more clearly delineating managerial functions, and adopting a greater degree of overall professionalism which can aid in analyzing potential markets, and designing or enhancing products and services to meet projected market demand.

In a word, SMEs are “bankable,” while microenterprises generally are not and thus remain the preserve of NGOs and specialized microfinance institutions.

Nevertheless, challenges do remain, and in many markets have resulted in banks eschewing SME lending altogether in favour of loans to corporations considerably larger than typical SMEs.

Although the developmental rationale for SME lending should be all but self-evident, a brief synopsis is in order. SMEs overwhelmingly form the majority of enterprises in almost any country one might examine, both developing and developed. SMEs comprise 96% of businesses in Asia and account for two out of every three private sector jobs. They account for 42% of GDP (Yoshino and Taghizadeh-Hesary, 2018). In the US, according to the Small Business Administration (SBA) SMEs represent 99.9% of total businesses, although the definition of what constitutes an SME covers all firms with fewer than 500 employees.

SMEs are often defined by central banking authorities in terms of number of employees, annual “turnover” (sales), or value of total assets. These definitions vary widely from country to country. A more reliable point of departure is to look at the following factors:

- Organizational structure (most SMEs are sole proprietorships with a sprinkling of limited liability companies. Outside of highly developed economies such as Japan, virtually none are corporations)

- Lack of financial statements (and therefore lack of accountants and auditors)

- Simplicity of functional responsibilities (no financial managers, marketing departments or customer service representatives)

- No planning function (including succession planning). Most are simply “the Boss” and his employees – an entirely “horizontal” organizational arrangement

Assuming it is convinced by the relationship prospects afforded by a largely unbanked market segment offering built-in portfolio diversification and located at its very doorstep, how does a bank approach such a disorganized market?
Successful SME programs implement policies and procedures to mitigate the drawbacks presented by SME lending (Table 1).

**Table 1**

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Financial Statements</td>
<td>Applicant does not produce financials</td>
<td>Application/Analysis template (analysis of available data to produce <em>pro forma</em> statements and projections)</td>
</tr>
<tr>
<td>Lack of Collateral</td>
<td>Applicant does not meet normal collateral requirements</td>
<td>Cash-flow lending approach, collateral as security not source of repayment, taking whatever is available</td>
</tr>
<tr>
<td>Perceived Management Deficits</td>
<td>Lack of background, verifiable expertise</td>
<td>Credit scoring, credit reports, enterprise track record, initial interview, short loan tenor</td>
</tr>
<tr>
<td>High Transaction Costs</td>
<td>High costs vs low earnings on SME loans</td>
<td>Semi-automated application, analysis &amp; approval process, template-driven solutions, no follow-up visits</td>
</tr>
<tr>
<td>Overall Less Than Optimal Credit Assessment Possibilities</td>
<td>All risk factors described above</td>
<td>Credit training for lending staff</td>
</tr>
</tbody>
</table>

*Source: Munro (2013).*

The recommended approach will be described in greater detail in the next section; however, the key elements are as follows:

The creation of rudimentary financial statements is a must. Reliance on credit scoring in many countries is not an advisable avenue to pursue. To accurately predict borrower behaviour, credit scoring must be country-specific and must rely on an extensive database of borrowers. Credit scoring works best for financial services companies such as Mastercard, which maintains huge databases on which it can rely to fashion dependable lending algorithms. Short of such a database, it is safer, and in many respects preferable, to use a cash-flow analysis approach. The reason many banks in developing countries do not lend to SMEs is that they employ an “asset-based” lending model. In other words, they rely upon collateral as an all-important consideration when extending credit. Collateral, however, as we all should know, is not a source of repayment: it is a form of security – and often very difficult to liquidate in the event of borrower default.

Cash-flow-based lending relies upon financial statements. If unavailable, the banker must have at his or her disposal sufficient applicant records from which to fashion pro forma or provisional financial statements. A good start is to examine an applicant firm’s bank statement. For financial projections, the banker may assume that all credits to the firm’s account are Sales. This is a safer method than relying upon the proprietor’s assertions. From this initial point, anchored in actual borrower figures, estimates of Cost of Goods Sold and Operating Expenses can be made, which are sufficiently reliable to enable the preparation of an income statement and/or cash budget. The
methodology will be described more fully in the chapter on Analytical Framework. The objective of the financial statement preparation exercise is to create a balance sheet and income statement (or cash budget) from which financial projections for the period of the proposed loan may be computed. Automation of this process is recommended to lessen the time loan officers spend collecting and analyzing client financial data and to provide a consistent analytical approach.

Management shortcomings may be mitigated by checking the manager’s credit history, testing a few of his assumptions/declarations as the process of financial analysis progresses as well as checking his and the firm’s reputation with suppliers and customers. In the event there is a confluence of lack of succession planning, a somewhat unhealthy SME owner/manager and a term loan request, Key Man insurance may be obtained to cover principal and interest on the loan should the owner die or become incapacitated prior to the final maturity date.

A critical variable in Table 1 is transaction costs. SME loans may cost as much in loan officer time and bank due diligence expense as much larger, more profitable corporate lending facilities. It is vital to keep the process as simple and as automated as possible, while still retaining sufficient analytic rigour to eliminate from consideration applicants who represent an unacceptably high credit risk. Multiple calls on the firm are out of the question. It is imperative that a good loan be made from the outset – one that repays itself without active monitoring or intervention on the part of the loan officer. Loan structure is an important ally in this regard, as are eligibility requirements and loan agreement covenants. For new borrowers, tenors should be kept short, and “bullet” (one-time) repayments at final maturity avoided. A short-term advance with monthly repayments is a good model for a starter loan.

For dealing with sub-optimal lending conditions, a bank’s best defence is sound credit training for loan officers. It is an investment that can save a bank many times the cost of training in lost revenues and defaulted loans.

3. Fundamentals of a Successful SME Lending Program

The Necessity of Establishing Creditworthiness

Lending money involves taking risks. Before we can discuss how these risks may be mitigated, they must first be identified and analyzed. There are numerous tools and resources banks can employ to establish a new borrower’s risk profile. From a bank’s perspective, the paramount risk is “credit risk” or “financial risk,” which is revealed by the financial performance of the SME over a prescribed period of time. But underlying financial risk are its components, operating risk, product/service risk, and market risk (Figure 1).

Figure 1
Components of Financial Risk

Source: Prepared by the author.
Operating Risk, simply stated, is the combination of operating policies, procedures, and management inputs with the specific circumstances of the firm’s operating environment. These risks include:

- Production efficiency – optimum utilization of plant and equipment
- Prudent management of inventory, including maintenance of appropriate levels of raw materials and adherence to proper storage protocols
- Optimum use of labour: staffing levels
- Maintenance of appropriate levels of workplace safety
- Reliable, sufficient electricity supply (as well as other “environmental” factors, such as water supply, fuel and communications infrastructure)
- Adequate supplier and distributor arrangements (redundancy of suppliers, if possible)
- Overall production levels suitable to meet planned-for demand
- Recognition of environmental risks associated with the production process and development of an appropriate risk-mitigation strategy

Product/Service Risk is the demand for the product as well as the quality of the product delivered. Does the applicant firm have a range of products aimed at different market segments, or is it a one-product firm? If the latter is the case, the risk is heightened. If the product is a service, are required standards being consistently met (as evidenced by maintenance of sales volume or, better yet, growth in sales)?

Market Risk encompasses the fickleness of the marketplace. Is the product a commodity such as cement or sugar, which competes largely on price? Or is it a niche, luxury product whose success depends on its brand name and reputation for excellence or exclusivity? Is it a unique product with no competition for its customer base? Or is it something of a mixed picture – a well-regarded product in a market where it competes against several other similar products, possibly on price plus a number of other variables including reputation for quality, good service, attractive packaging, and the like?

Is the product susceptible to any of the following exogenous factors which might threaten its production or diminish its appeal?

- Supply bottlenecks
- Introduction to the market of new products/services which render it obsolete
- A related factor – is there an evident “technology risk” to the product, or is it being appropriately enhanced and improved as technology advances?
- Substitution risk from a cheaper product
- Reduction in protective tariffs or other governmental measures which might make its continued production uneconomical
The establishment of creditworthiness involves both an examination of the past – including the factors enumerated above – and a projection into the future. Bankers must assume the role of seers who dare to predict what will happen six months, a year, or even five years from now.

The various risk factors – how they are addressed or ignored, overcome or neglected – will manifest themselves in the business’s income statement and balance sheet. If we do not have access to firm-produced financial statements, we must concoct proxy statements, however rudimentary, to enable us to confidently assess the risk of lending.

What does the term “creditworthiness” cover? In addition to bearing in mind (and carefully analyzing) the risks discussed in the foregoing paragraphs, an old banker’s taxonomy is useful – the Five C’s of Credit:

1. **Cash**: refers to cash generated by operations, from which loan repayments may be made
2. **Condition**: is the firm’s financial condition, as revealed in its balance sheet
3. **Capacity**: refers to the firm’s capitalization – how much debt it can prudently support
4. **Collateral**: is security whether via pledged assets or by means of guarantees
5. **Character**: is the applicant’s moral fiber as revealed by his repayment of past obligations

In a model that emphasizes cash flow as the decisive factor (the ability to generate sufficient cash from operations to cover loan obligations), it is wise to remember that Character is a critical consideration – a history of prompt payment of suppliers and, indeed, all creditors is vital. The solidity of the balance sheet and the associated ability to support the debt burden that the proposed lending will impose are factors revealed through an examination of financial Condition and Capacity. Only Collateral is of secondary importance. As mentioned earlier, it should never be considered a source of repayment, but more a means of warning the borrower that he risks his entire business if he defaults on his loan, causing the lender to seize his assets and attempt to liquidate them.

These are some of the concepts that go into analyzing a firm’s creditworthiness. What are the tools we might use to obtain our objective?

**Credit Scoring**

As mentioned in the Introduction, credit scoring is most effective when the model is developed through the inclusion of a large set of data. At the same time, no “off the shelf” credit scoring program should be trusted. Behavioural credit scoring is, by and large, a culture-specific tool whose validity is eroded when deployed in countries not featured in the database. Just as the appropriateness of specific lending arrangements may differ by country, so do the relative weights borne by certain types of data developed through credit scoring.

In its most elementary form, a credit score questionnaire is a series of questions covering a business’s operations as well as its management. The list should be kept relatively short and the results tested against the bank’s loan portfolio to determine the mechanism’s ability to predict which loans will repay and which will not. Questions should be refined to the point where the predictive capacity of the score is greatest (where the smallest number of defaulters receive a passing score, and the smallest number of repayers a failing score).
Even so, this author believes that regardless of the adjudged predictive capacity of the score, the bank should not rely on this mechanism alone. In a program which the author developed, credit scoring was used as an initial “sift,” with credit analysis as the primary mechanism used to determine creditworthiness.

**Cash-Flow-Based Analysis and Approval Regimen**

A full-blown credit analysis can take anywhere from a week to a month or more to complete (including credit checking from third parties). In addition to analyzing in detail the applicant’s financial statements, pro forma projections are made of the balance sheet, income statement and cash flow statement through the life of the proposed loan. More than one version of the projections may be prepared to reflect varying assumptions. The recommendation as to whether or not to extend credit is based upon what is judged to be the likeliest scenario. In addition to extracting the cash flow by running an income statement through an opening and closing balance sheet, a typical credit analysis includes the computation of structural balance sheet ratios, revealing the firm’s financial condition (as per the Five C’s), calculating the “leverage ratio,” (Capacity) showing the effect of the proposed loan on the critical ratio Total Liabilities/Capital Funds, and liquidity ratios such as Current Assets/Current Liabilities or Cash/Current Liabilities.

Performance ratios are prepared using elements of the income statement (not the least of which is the Debt Service Coverage ratio, Cash from Operations/Principal and Interest Due for the period), Gross Margin and Net Margin, respectively Gross Income/Sales and Net Income/Sales.

Activity ratios combine elements from the balance sheet and the income statement. These “turnover ratios” reveal the number of days’ inventory, accounts receivable and accounts payable represented by balance sheet entries.

Referring to industry surveys such as those prepared by Dunn & Bradstreet, the analyst will compare the applicant firm’s results with industry leaders or the industry average.

Alas, as the reader may well have already surmised, this kind of exhaustive, in-depth analysis is incompatible with the economics of SME lending.

**The Need for Cost-Effective Analysis and Approval Protocols**

If we start from the assumption that SME loans should not bear usurious rates of interest, and recognize that their size will be relatively small, it is clear that loan origination, approval and processing costs must be kept to an absolute minimum. At the same time, a sufficient degree of analytical rigour must be preserved in order that non-performing loans do not swamp our SME lending portfolio.

Let’s assume the average loan size is $30,000 and the applicable interest rate 3%. The cost of funds is 1.5%, so our “spread” will be 1.5%. The average tenor of our portfolio of SME loans is one year. Accordingly, we will gross 0.015 x $30,000 = $450. This is a before-tax and before reserves figure. We must cover all origination, approval and loan administration costs from this

---


5 An OECD survey conducted in 2019 divided countries into three groups, the first consisting primarily of advanced European nations and the US, the second large developing economies, and the third southern and eastern European economies. The average spreads for SME loans in the three groups were 1.0%, 2.1% and 1.1% (OECD, 2019).
figure and, in addition, earn a profit. As the example makes abundantly clear, extending “small-tick" loans to SMEs can only be undertaken profitably if transaction costs are kept to an absolute minimum.

From the borrower’s standpoint, there are considerations that dictate a streamlined, efficient credit application and approval process as well. Among the most attractive features of fintech loans is the speed of approvals or rejections. By contrast, as noted above, commercial banks often take as long as a month or more to render judgment on credit applications.

4. Components of a Lending Program

In order to streamline the lending process, conserve staff as well as prospective customer time, and standardize or regularize the borrowing process as much as possible while at the same time avoiding the pitfalls inherent in the Fintech approach (lack of personalization, restrictive product offerings or product specifications and a – presumed – high default rate), program components should be carefully constructed as follows.

Clear Eligibility Requirements

Based upon personal experience over a lengthy career in SME lending, the author recommends the following:

1. At least one year of profitable business operations (in other words, no start-ups)
2. Businesses must be registered with appropriate tax and other governmental authorities
3. Businesses must have no history of bankruptcies and their principals must have clear borrowing records
4. Acceptable loan purposes must be clearly spelt out. To increase production, sales, acquire machinery and equipment, build new premises or refurbish existing ones – all of these are acceptable loan purposes. Unacceptable loan purposes include start-up capital, retiring or rescheduling existing debt, speculation in commodities or foreign currencies, expanding into new untested markets, developing entirely new products, or stockpiling raw materials beyond the requirements for one production season. Lenders must always bear in mind the caveat that they should never accept investment risk in return for a lender’s reward
5. In the case of applicants without financial statements, an account relationship with the bank must have been maintained for at least one year

Sound Loan Documentation

Invest in carefully prepared loan, pledge and guaranty agreements authored by attorneys whose documentation has stood up in court.

Some clauses to consider:

1. Conditions Precedent. That the borrower represents and warrants that it is a legal entity in compliance with all laws and regulations of the jurisdiction in question; that the borrower is current with all tax obligations; that the borrower is registered with the required local authorities, and that it be “in good standing.” In general, the borrower’s affirmation of the
above should be sufficient, with the proviso that any such affirmation proving to be untrue would constitute an event of default.

2. Retention of earnings in the business. Drawings by owners/partners should be limited to salaries or other compensation expressly permitted by the terms of the loan agreement.

3. Leverage covenant. The ratio Total Liabilities/Owner’s Equity may not exceed 1:1, or 2:1. For first-time borrowers, leverage should be held to 1:1.

4. No additional borrowings from any third party without the express written consent of the bank.

5. That the bank’s debt be senior, and that no subsequently contracted debt subordinate to the bank’s position.

6. That the borrower agrees to pay for an outside appraiser to establish the market value of fixed assets (and, possibly, depending upon the nature of the financing, inventory).

7. That the borrower maintains such financial records as the bank requires.

8. That the borrower advises the bank of any “material adverse occurrence” affecting the business or its financial condition.

**Loan Product Offerings**

Loan products should be kept simple but flexible. The author recommends that any SME lending program have two basic products, a term loan for fixed asset acquisition (or renovation of premises) and a line of credit for working capital finance. The line should “revolve;” in other words, a limit should be established under which the borrower may draw and repay as its needs dictate, with the proviso that at least once annually it “clean up” or completely pay down the line and remain “off the books” for a prescribed period of time, perhaps two weeks or a month, before drawings may recommence. At this time, the line should be officially reviewed and renewed or terminated, depending upon the borrower’s performance.

In the event the line does not revolve, it may instead be structured as short-term advances for a stated period of time that – once repaid in full – may be renewed. Naturally, the revolving line is much more attractive to the borrower as it provides a greater degree of flexibility; in addition, a revolving line can be structured in such a manner that the lender is afforded considerable protection.

These two product offerings may be configured or customized to meet the requirements of the majority of SME borrowers.

**The Analytical Framework: Online Application and Approval Process**

Application forms should be computerized and filled out by a staff person at a branch (in the presence of the applicant) or, possibly, online by the applicant.

There are arguments to be made for branch-level approvals and arguments to be made for centralizing approvals. With the adoption of semi-automated lending platforms, however, the days of branch-level approvals may be coming to a close. Often, a mechanism is developed whereby branch officials “recommend” a credit facility, which is then approved or rejected by a central credit approval authority.
As part of the application process, programs developed by the author have required that the applicant complete the credit scoring questionnaire as an initial step in the application process. The score is immediately tabulated, and the applicant is informed if s/he has passed or failed. Those who pass may proceed through the next steps in the process.

**Submission of Financial Statements or Creation of Financial Statements**

In countries where the author has worked, many SME borrowers lack financial statements. In addition, they often do not maintain sufficient records from which an accountant might prepare financials. They do, however, usually keep records of sales and, as their businesses are often family affairs with very few employees (often, no outside employees), they can easily provide a tabulation of their monthly operating expenses. How can we approximate financial statements for such prospective borrowers?

**The Income Statement**

The first task is preparing a pro forma income statement or statement of profit and loss. Rather than rely upon the proprietor’s assertions regarding sales, the SME lender should insist that the applicant has maintained a current account on its books for a stated period, normally a year. All credits to the account will be considered “Sales” for the purpose of constructing the income statement.

The next entry on the income statement is Cost of Goods Sold. Again, the applicant is unlikely to have records of materials purchases and labour costs from which to tabulate this figure. Accordingly, rough industry averages may be used to approximate Cost of Goods Sold (Table 2):

**Table 2**

<table>
<thead>
<tr>
<th>Cost of Goods Sold/Sales</th>
<th>Industry Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>80%</td>
</tr>
<tr>
<td>Service</td>
<td>35%</td>
</tr>
<tr>
<td>Retail/Wholesale Trade</td>
<td>70%</td>
</tr>
<tr>
<td>(Agriculture)</td>
<td>(80%)</td>
</tr>
</tbody>
</table>

*Source: Munro (2013).*

These averages, while certainly approximations, are generally not far off the mark and are conservative. Agriculture is placed in quotation marks as we do not recommend that agricultural lending be undertaken using the methodology outlined herein. It is a specialized form of lending which poses considerable risk to the lender and should be dealt with following more elaborate protocols.

Operating expenses are generally known to the applicant, as they tend to be the same every month. They include:

- Rent and utility expenses accruing to office space (not factory premises, which forms part of Cost of Goods Sold)
- Salaries of management and office staff (not factory workers, which, again, are part of CoGS)
Transport/Delivery
Proprietor’s draw
Advertising and promotion
Legal and accounting
Insurance
Maintenance of office space (factory maintenance is charged to CoGS)
Operating Expenses

With the applicant’s provision of these expenses, the income statement can be prepared. We suggest that for purposes of statement creation, non-cash items such as depreciation, goodwill, and the like be ignored. The result will make our pro forma income statement more of a cash budget – less confusing when we undertake projections through the life of the loan. Table 3 shows a hypothetical example.

**Table 3**  
**Income Statement, Ace Widget Co. as of 12/31/20X0**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>10,000</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>(8,000)</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>2,000</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(1,200)</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>800</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>0</td>
</tr>
<tr>
<td>Net Income Before Tax</td>
<td>800</td>
</tr>
<tr>
<td>Income Tax</td>
<td>(400)</td>
</tr>
<tr>
<td>Net Income</td>
<td>400</td>
</tr>
</tbody>
</table>

*Source: Prepared by the author.*

In this example, the firm is a manufacturing concern, has no debt on its balance sheet, and the income tax rate is 50%. The only distortion as far as cash flow is concerned will be in the event the business offers its customers credit and/or receives credit from its suppliers resulting in Accounts Receivable in the former case and Accounts Payable in the latter. In these cases, income and cash will not be identical: cash from operations will be overstated by the amount of Sales still to be paid by customers who bought on credit and understated by the amounts still owed suppliers. Adjustments will need to be made to arrive at Cash from Operations.

**The Balance Sheet**

Unlike the Income Statement whose contents are totals covering a specific period such as a year, the Balance Sheet is a snapshot of a single moment in time.

The first item on the Asset side of the balance sheet is Cash. This will be the balance in the applicant’s account as of the day chosen to begin the firm’s financial year.
The second item is Accounts Receivable. If the applicant offers customers credit, there will be amounts due from Sales on the balance sheet. For our example, we will assume that the applicant firm offers its customers “net 30 days” sales terms. This means all amounts purchased on credit must be paid by the end of 30 days from invoice date.

The third item is Inventory. The bank may make a physical count of inventory or accept the applicant’s tabulation. Using the applicant’s estimate and making a cursory inspection of inventory on hand during the one site visit recommended is generally sufficient. If there is anything radically inaccurate, it should be apparent to an alert banker. The amount of inventory on hand should “make sense,” of course. Using the calculation Inventory Value / (Annual Cost of Goods Sold / 360) will give you the number of days’ inventory on hand. If there is more than a month’s inventory in storage and the peak selling season is not next month, the banker will have some pointed questions for the applicant.

To arrive at a valuation of Fixed Assets, we recommend that historical cost be used and that an outside appraisal be obtained to value machinery and equipment, at the applicant’s expense. The reason for this is that the offset to Fixed Assets on the other side of the balance sheet is Owner’s Equity. There will be every reason for an applicant to exaggerate the value of a plant and equipment in order for equity to be stated at a higher value (a critical factor when the bank calculates financial leverage and debt capacity). The applicant should agree in advance to bear the cost of this appraisal with the understanding that it in no way obligates the bank to extend credit.

On the liability side, if the applicant receives supplier credit, there will be an entry for Accounts Payable. This is a figure the applicant should have at his disposal. In the event he does not, an approximation can be made on the basis of the percentage of Cost of Goods Sold that is represented by raw materials purchases for which there is supplier credit. It is extremely doubtful that small businesses lacking financials will be beneficiaries of supplier credit. The most that might be encountered would be on the order of “net 30 days” terms. In general, one would expect suppliers to demand cash on the barrelhead for all raw materials purchases.

Other current liabilities include Taxes Payable and Loans Payable. Again, most small businesses which lack financials will not have outstanding debts (other than from the proprietor or his family members) and will not be accruing entries for taxes and other payables. In the event there are taxes due, they are likely overdue!

Owner’s Equity is composed of Retained Earnings, Capital Stock and Reserves. Small enterprises will show only Retained Earnings in their Owner’s Equity account. And again, O/E is the offset for Fixed Assets, and a balance sheet “plug” – is a figure used to make the balance sheet “balance” (Table 4).

---

Bankers often use a 360-day year for computing ratios.
Table 4
Balance Sheet, Ace Widget Co. as of 12/31/20X0

<table>
<thead>
<tr>
<th>Assets = Liabilities + Owner’s Equity</th>
<th>Current Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Cash 1,000</td>
<td>Accounts Payable 467</td>
</tr>
<tr>
<td>Account Receivable 417</td>
<td>Taxes Payable 0</td>
</tr>
<tr>
<td>Inventory 333</td>
<td>Short-Term Loans Payable 0</td>
</tr>
<tr>
<td>Other Current Assets 0</td>
<td>Other Current Liabilities 0</td>
</tr>
<tr>
<td>Total Current Assets 1,750</td>
<td>Total Current Liabilities 467</td>
</tr>
<tr>
<td><strong>Fixed Assets</strong></td>
<td>Long-Term Debt 0</td>
</tr>
<tr>
<td>7,500</td>
<td>Owner’s Equity 8,783</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>Total Liabilities + Owner’s Equity 9,250</td>
</tr>
</tbody>
</table>

Source: Prepared by the author.

Balance Sheet Assumptions:
- Cash: Amount in bank account as of start of financial year
- Accounts Receivable: 50% of Sales are on credit terms. A/R balance represents 30 days’ credit Sales
- Inventory: 15 days’ Cost of Goods Sold
- Accounts Payable: 30 days’ Raw Materials Purchases which equal 70% of Cost of Goods Sold
- No bank or other debt
- Fixed Assets are plant and equipment valued by outside appraiser

Accounts Receivable: 0.5 x 10,000/12 = 417 (We assume equal monthly sales unless we have information on seasonal patterns).

Inventory: 8,000/360 x 15 = 333.

Accounts Payable: 0.7 x 8,000/360 x 30 = 467.

Fixed Assets: As per appraisal.

Owner’s Equity: Total Assets – Total Liabilities = O/E.

A computerized spreadsheet or another program should be developed to make the computations involved in constructing the Income Statement and Balance Sheet. Inputs for the Income Statement include Sales, type of industry (to determine CoGS), Operating Expenses and Interest Expense. The tax rate would be built into the spreadsheet.
Inputs for the Balance Sheet include Cash (from the bank statement), Number of days Sales in A/R, number of days’ CoGS in Inventory, as well as the raw materials percentage, and number of days’ CoGS in Accounts Payable. Current Bank debt, Taxes Payable, and Other Current Liabilities and Long-Term Debt are manual inputs.

**Transaction Analysis (Cash Flow Generation) and Financial Statement Projections**

The applicant has approached the bank for a short-term loan to augment working capital (defined as Current Assets – Current Liabilities). S/he plans to ramp up production in order to meet a sizeable order from a new customer. One thousand additional units are to be produced at a sales price of $5/unit. (The Sales figure in our Income Statement for 20X0 represents 2,000 units at $5/unit). The Sales increase is well beyond what one might expect under normal circumstances – it represents a 50% increase in Sales, and the raw materials supplier is unwilling to increase the level of his financing to meet the anticipated Sales figure. He is not willing to extend more than 30 days’ financing on purchases at the level recorded in the previous year. We have verified the purchase order from the new customer for 1,000 units, and have a written undertaking that s/he will consummate the purchase by the end of the coming year. Credit checkings on the new customer are positive. Our task now is to determine whether or not the applicant can repay our short-term loan. We have decided that the applicant should meet 50% of the cost from his own resources. The unit cost of the product is 8,000/2,000 = 4. One thousand additional units will cost 4,000. The applicant’s share will be 2,000, and the bank’s share 2,000.

We now need to construct a spreadsheet from which a cash flow statement may be extracted. See Table 5.

**Assumptions:**

- There will be no additional growth in Sales
- All other features/relationships in our current Income Statement and Balance Sheet will remain constant over the coming year
Table 5
Projection of Income Statement, Balance Sheet, and Cash Flow for 20X1

5A Transaction Analysis

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>A/R</th>
<th>Inv.</th>
<th>F/A</th>
<th>A/P</th>
<th>S T Loan/P</th>
<th>O/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/31/X0</td>
<td>1,000</td>
<td>417</td>
<td>333</td>
<td>7,500</td>
<td>467</td>
<td>0</td>
<td>8,783</td>
</tr>
<tr>
<td>Cash Sales</td>
<td>7,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7,500</td>
</tr>
<tr>
<td>Credit Sales</td>
<td>7,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7,500</td>
</tr>
<tr>
<td>CoGS</td>
<td>(12,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(12,000)</td>
</tr>
<tr>
<td>Oper.Exp</td>
<td>(1,200)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1,200)</td>
</tr>
<tr>
<td>ST Loan</td>
<td>2,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,000</td>
</tr>
<tr>
<td>Raw Materials</td>
<td>(2,800)</td>
<td>8,400</td>
<td></td>
<td>5,600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factory Labor</td>
<td>(3,600)</td>
<td>3,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collection A/R</td>
<td>7,500</td>
<td>(7,500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment A/P</td>
<td>(5,600)</td>
<td></td>
<td></td>
<td></td>
<td>(5,600)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>(100)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(100)</td>
</tr>
<tr>
<td>Pmt. ST Loan</td>
<td>(2,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2,000)</td>
</tr>
<tr>
<td>12/31/X1</td>
<td>2,700</td>
<td>417</td>
<td>333</td>
<td>7,500</td>
<td>467</td>
<td>0</td>
<td>10,483</td>
</tr>
</tbody>
</table>

5B Statement of Sources and Uses of Cash 20X1

<table>
<thead>
<tr>
<th>Source/Use of Cash</th>
<th>1/1/20X1</th>
<th>20X1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Balance at 1/1/20X1</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Cash Sales</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(1,200)</td>
<td></td>
</tr>
<tr>
<td>Purchase of Raw Materials</td>
<td>(2,800)</td>
<td></td>
</tr>
<tr>
<td>Payment of Factory Labor</td>
<td>(3,600)</td>
<td></td>
</tr>
<tr>
<td>Collection of Accounts Receivable</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>Payment of Accounts Payable</td>
<td>(5,600)</td>
<td></td>
</tr>
<tr>
<td>Cash from Operations</td>
<td>2,800</td>
<td></td>
</tr>
<tr>
<td>Proceeds of Short-Term Loan</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Repayment of Short-Term Loan</td>
<td>(2,000)</td>
<td></td>
</tr>
<tr>
<td>Payment of Interest on S.T. Loan</td>
<td>(100)</td>
<td></td>
</tr>
<tr>
<td>Balance of Cash at 12/31/20X1</td>
<td>2,700</td>
<td></td>
</tr>
</tbody>
</table>

5C Income Statement 20X1

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>15,000</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>12,000</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>3,000</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>1,200</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>1,800</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>100</td>
</tr>
<tr>
<td>Net Income Before Tax</td>
<td>1,700</td>
</tr>
<tr>
<td>Income Tax</td>
<td>850</td>
</tr>
<tr>
<td>Net Income</td>
<td>850</td>
</tr>
</tbody>
</table>
### 5D Balance Sheet as of 12/31/20X1

<table>
<thead>
<tr>
<th>Assets = Liabilities + Owner’s Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
</tr>
<tr>
<td>Cash 2,700</td>
</tr>
<tr>
<td>Account Receivable 417</td>
</tr>
<tr>
<td>Inventory 333</td>
</tr>
<tr>
<td>Other Current Assets 0</td>
</tr>
<tr>
<td>Total Current Assets 3,450</td>
</tr>
<tr>
<td><strong>Fixed Assets</strong></td>
</tr>
<tr>
<td>7,500</td>
</tr>
<tr>
<td>Total Assets 10,950</td>
</tr>
</tbody>
</table>

*Source: Prepared by the author.*

The Cash Flow is contained in the “Cash” column. Cash from Operations is the subtotal before repayment of principal and interest, or 2,800. The Income Statement appears in the Owner’s Equity column, and the ending balance sheet for 12/31/20X1 runs across the bottom row.

The projection shows that the firm can comfortably handle the 2,000 internal financing of additional CoGS as well as the bank loan of 2,000. It is a classic case of timing differences. Ace needs the funds to increase inventory at the season’s outset, but once customer payments are received has no trouble repaying the short-term loan. As we did not increase Sales (other than the addition of the new customer), account totals remained the same. Normally, you might expect to see as much as a 10% or 15% Sales increase, resulting in altered CoGS and changed account totals for the ending balance sheet.

A few computational notes: The supplier will only allow the firm credit on the amount of the previous year’s Sales; thus, the cash payment for raw materials. Factory labor is a part of CoGS, but of course, not part of Accounts Payable. It is therefore shown paid in cash with the offsetting entry being a credit to Inventory. Inventory is charged the full amount when CoGS is debited from Inventory and Owner’s Equity.

Equations in the spreadsheet (number of days A/R, Inventory and A/P outstanding), as well as column additions and subtractions, make the task of preparing the pro forma statements quite simple.

For revolving credits, it is recommended that quarterly cash flows be prepared using the identical methodology. Most businesses are seasonal; seasonal sales peaks can be accommodated via quarterly computations, as may “low” or normal quarters. Such a spreadsheet might show two “high” quarters and two “low” quarters. In one of the latter, the projection should call for complete repayment of the line of credit - a “cleanup” - for a specified number of days before borrowing may recommence.

**Summary**

The key to cost-effective lending protocols is the automation of the credit analysis process (Figure 2). Analysis time can be cut to a matter of hours, as long as applicant data are provided. The approval process is normally centralized in a Loan Production Center, which will review the
financial statements, projections, application materials, credit score and brief write-up, including a
description of the loan purpose and business plan. The write-up should cover issues involving
market penetration and competition, product quality, and a report of the site visit. It is
recommended that there be an initial site visit in which operations are reviewed carefully, noting
the firm’s location in relation to his or her market(s), the appearance of the site, presence and
quality of inventory on view (including an estimate of how much is composed of raw materials,
work in progress, and finished goods), whether or not there is a reassuring level of activity in the
factory or place of business, as well as the professionalism and candour of the proprietor or
manager. Given the economics of SME financing, further site visits are generally not justified.

**Figure 2**
The Credit Analysis Process

![Credit Analysis Process Diagram]

**Sources of Credit Information**

Most countries worldwide have credit information agencies, either public sector (often a
department of the Central Bank) or private. International firms such as Experian and Equifax are
expanding their operations throughout Asia. The focus has been on consumer credit, however, and
credit registry data on SMEs is still in its infancy.

“Blacklists” of borrowers who have defaulted on loans are maintained by some Central Banks. A
key difficulty has been requiring lenders to cooperate with credit reporting agencies.

The elaborate Dunn & Bradstreet industry profiles and company reports familiar to lenders in the
US and other developed nations are all but unknown throughout much of the rest of the world.
One of the challenges to SME lenders is understanding how their applicants compare with other
small firms in the same country and industry. The comparison of ratios across international
boundaries is fraught with difficulties related to relative stages of development (availability of
electricity and adequate transportation grids, for example) as well as the effect of government
regulations on business operations.
While credit reporting and rating agencies are expanding their operations throughout the area, the benefits to lenders are sketchy at best. Even if reporting agencies are reasonably active, a frequently encountered drawback is the staleness of data on file. When dealing with the smaller end of the SME universe, of course, credit reports and ratings of businesses which do not prepare financial statements are virtually non-existent. Credit checkings on principals are possible, however.

**Loan Guarantees**

By the time of this writing, most countries around the world have loan guarantee funds, often sponsored by central banking authorities or ministries of finance. There are also private sector credit guarantee funds, prominent among them the Confidi system in Italy founded in 1972 through which credit cooperatives guarantee their members’ loans from commercial banks. Bankers’ associations may sponsor and subscribe capital to credit guarantee funds as well, as is the case in Iraq.

The objective of loan guarantee funds is to induce commercial banks to extend credit to SMEs (or other targeted borrowers, such as women entrepreneurs, specific types of export-oriented firms and even start-ups) by substituting the credit guarantee fund as the lending risk instead of the SME. Arrangements vary among the many schemes, but in general, funds guarantee both principal and interest. Coverage varies between 50% for programs sponsored by USAID, to 70-80% of principal. In general, higher coverage rates produce greater participation among commercial banks.

The primary problem with such funds, of course, involves the concept of moral hazard. While the objective of the fund may be to accustom banks to taking SME risks on their books, the actual success of the schemes lies simply in the risk substitution. Should the guarantee program be curtailed or eliminated, banks would likely return to their pre-guarantee-fund stance of avoiding SME lending or imposing collateral requirements that most SMEs cannot meet.

The key, in this writer’s view, is to tie guarantee extension to reforms in the banks’ lending protocols - inducing them to employ cash-flow-based lending protocols instead of an asset-based approach and refusing to extend guarantees for clients who become second-and third-time borrowers. An additional proviso might be to limit the lifetime of the guarantee fund to a specific date beyond which it would cease operations, the assumption being that by this time, participating banks should have developed both a comfort level and appropriate lending protocols and systems to continue funding SMEs without guarantees. Naturally, this scenario is probably too rosy to be practical.

There are a number of conundrum at work here: Institutions are unlikely to plan and work towards their own obsolescence. On the contrary, loan guarantee funds are often encouraged to be self-sustaining through a combination of fee income and investment returns on their capital in order for operating expenses to be covered and a small profit achieved. Thus, the notion of a self-sustaining subsidy is born.

In addition to the larger picture issues suggested above, there are certain negative factors afflicting loan guarantee schemes as well, among them:

- Lengthy turn-around time. Some guarantee funds spend as much as a month performing their own credit analysis before reaching a guarantee decision
- The submission of sub-par loans for consideration by the fund – only using the fund for clearly uncreditworthy loan applicants
• The high cost of guarantees. Guarantee fees are generally in the range of 1.5 – 2%, but can be as high as 3.75%. Many commercial banks are loathed to reduce their spreads for SME borrowers simply because the loans are guaranteed, a situation that can considerably raise the cost of finance for beneficiary small businesses.

• Claim and payout procedures may be time-consuming and onerous. Some schemes require that participating banks liquidate all pledged collateral before calling their guarantees. There are programs that require defaulting borrowers to formally declare bankruptcy before initiating payouts under guarantees. At the other end of the spectrum, we find programs which are “first payers,” paying out all or a portion of the guaranteed amount when the guarantees are called.

Policy Issues: How Government Policies May Incentivize Commercial Bank Lending to SMEs

The OECD describes a variety of governmental interventions that can aid the SME sector. Table 6 gives an indication of the scope and breadth of governmental involvement.

Credit guarantee schemes are among the oldest governmental interventions to support SMEs. Asian leaders in this endeavor include Turkey, Japan and the Republic of Korea, which have amongst the highest ratios of guarantees outstanding as a percentage of GDP, at 7.6%, 4% and 3.8%, respectively (OECD, 2019). The rest of the continent (and, indeed, the world) was under 1%.

The intervention with which this writer has the greatest problem is subsidized interest rates. A principle of all SME financing programs with which I have been associated over my career is that market rates be charged. After all, one of the major goals of all programs should be to “professionalize” and “mainstream” SMEs, to get them to a point where they can stand on their own two feet and participate in the economy as the equals to larger enterprises. True, targeted loan guarantees are also subsidies, but at least they leave the actual financing mechanism intact as a market instrument.

Among highly developed Asian nations, the Republic of Korea and Japan are worthy of mention for the breadth of their support for SMEs. Korea has one of Asia’s oldest loan guarantee programs. The Korea Credit Guarantee Fund (KODIT), formed in 1976, was initially designed to guarantee loans to export industries as Korea rapidly industrialized. Financial institutions and companies are required by law to contribute funds to KODIT on an annual basis. In 2019, the Korean government added a strong regulatory incentive for commercial banks to increase their SME lending by raising the required Loans to Deposits ratio and reducing the number of household loans that could qualify for computing it. SME lending surged by an estimated $25 billion in 2019 (Tae-sung and Jeehyun, 2019).

---

7 The Small Business Administration (SBA) in the US charges as much as 3.75% for loan guarantees on amounts above $1,000,000. Smaller loans are charged guarantee fees of 2.25% -3.5%.
### Table 6
**Governmental Support for SMEs in Selected Asian Countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Government Loan Gtys</th>
<th>Direct Lending to SMEs</th>
<th>Subsidized Interest Rates</th>
<th>SME Banks</th>
<th>Special Gtys and Loans for Start-Ups</th>
<th>Venture Capital Funds</th>
<th>Business Angels Co-Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X**</td>
</tr>
<tr>
<td>China</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>X*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: OECD (2019).*

*Notes: *For exporting firms only **At the regional level only.

KODIT’s product lineup has expanded over the decades. In addition to guarantees for commercial bank loans, it offers bid and performance bonding, guarantees for letters of credit and corporate bonds, consulting services for SMEs and credit insurance.

Japan has a long history of support institutions for SMEs. Decades before the term became current in the West, Japan had intertwining structures devoted to furthering the development of SMEs by providing finance, management training, and issuance of credit guarantees and credit insurance. The Shoko Chukin Bank—a bank whose shareholders are SMEs—was established in 1936, the Japan Agency for SMEs (JASME) was founded in 1953, the Credit Guarantee Act was passed in the same year, and the Small Business Promotion Corporation was founded in 1967. Japan’s SME University was established in 1980.

JASME coordinates directly with the powerful Ministry of the Economy, Trade and Industry (METI) through a network of 60 prefecture-level centres and 40 district centres, in addition to the Chambers of Commerce and Industry of which there are 514 branch offices. Shoko Chukin Bank has 100 branches nationwide, and the Japan Finance Corporation boasts a network of 152 branches. The Credit Guarantee Corporation (CGC) worked in tandem with the Small Business Credit Insurance Corporation, established in 1958, to guarantee loans to SMEs and payment to the CGC through underlying insurance policies. Two further consolidations over the intervening years resulted in the credit insurance function being housed in the Japan Finance Corporation for Small and Medium Enterprise (JASME) in 2004. Support for start-ups consisting of special guarantee programs, venture capital initiatives and arrangement of “angel finance” is featured in nine of the ten Asian nations listed in the OECD scorecard. That these efforts are separate from initiatives to support existing SMEs is noteworthy and will be mentioned in the section below dealing with SME program shortcomings.
It should be added that programs covered in the OECD scorecard are in addition to the provision of credit rating and registry services, which exist in many nations and are often housed in the central bank.

Regulators are constrained by Basel III strictures from weakening to any meaningful extent reserve requirements on SME loans, particularly those that are uncollateralized. Despite this paper’s contention that SMEs are eminently bankable, it is undeniable that they represent a greater credit risk than corporate sector loans. The author would argue that the reason is deficient loan origination and credit analysis protocols, but notwithstanding this caveat, SMEs’ level of non-performing loans is twice that of corporate borrowers, according to OECD tabulations (OECD, 2019).

**Portfolio Management Issues/Risk Management Concerns, Including Follow-Up, Monitoring and Past Dues Management**

In order for credit officers’ efforts to be focused on marketing and developing the SME customer base in their branch locations, larger concerns such as portfolio management and loan administration (follow-up, monitoring and past dues management) need to be centralized. Given the marginal profitability of smaller loans, transaction costs need to be rigidly controlled at all levels. As mentioned in the Introduction, the kind of personal attention and “hand-holding” associated with microfinance can play no part in bank SME lending programs. Follow-up borrower visits are out, as are onerous documentation requirements whereby borrowers must submit monthly sales figures or inventory positions which then are to be verified by loan officers. The most that might be considered is a review of bank statements to ensure that there are continuing sales credits to the account (a process that could be automated).

“The best defence is a good offence,” is what the writer advised his SME lending staff. Make the best loans possible from the outset using loan structure, conditions precedent, eligibility requirements, specific loan agreement covenants, a credit score “sift,” credit checkings, and – most importantly - preparation of pro forma statements and cash flows in order that repayment problems not ensue. Invest in credit training for lending staff so that sound lending practices, as well as instincts, be inculcated.

Any necessary follow-up, as well as past dues management, should be handled centrally by a specialized department with its own legal staff. Restructurings, court filings and the like should be the responsibility of this unit, not the loan officer.

**Security and Collateral**

The approach advocated by this writer is not “anti-collateral,” per se. Collateral is fine as long as it is understood that in the real world where banks operate, collateral should never be considered a primary source of repayment. It is at most an unreliable, secondary source of repayment. Courts are understandably reluctant to foreclose on individuals and small family firms in order to pay off a bank loan: they are likely to advocate restructuring and patience on the part of the lending institution. This is not to say that banks should not take collateral: they should if only to prevent the borrower from pledging it to another lender. Collateral is a form of moral suasion, providing evidence of the bank’s seriousness about being repaid and indicating to the borrower that his entire business can be seriously disrupted or compromised should s/he not meet loan repayment obligations.
Common Shortcomings of SME Lending Programs – Things to Avoid

The author is reminded of a remark made to him by the local branch head of the Agricultural Bank of Sudan many years ago, as we began to roll out a USAID program creating rural agricultural credit cooperatives in North Kordofan:

“I want you around on the deposit mobilization trips, David. Seeing you with us makes people feel reassured about depositing their money in the bank.”

That was good to hear, but then he added:

“Maybe you could just stay in the office on the trips where we disburse loans. I don’t want borrowers to get the idea they don’t have to repay!”

Mixed messaging is the most insidious enemy of SME lending program success. Lending programs should NEVER be coupled with grant mechanisms such as “challenge funds.” Nor should they be saddled with obvious attributes of a government subsidy (even if the program is, in fact, supported by one or more governments). Primary among such attributes is subsidized lending rates. SME loans should bear market rates and, to the greatest extent possible, reflect market conditions. The emphasis should always be on enabling borrowers to meet credit standards, not diluting the standards.

Over a long career, I have witnessed programs (operated through banks) where as a sop to constituents, sponsoring governments waived interest charges or cancelled the remaining indebtedness of certain groups of borrowers. Is it any wonder that repayment rates on some government-sponsored lending programs are as low as 40%? And is it any wonder commercial bankers regard such programs with well-deserved derision?

When lending programs are sponsored by outside agencies, funding should be shared – if not provided in toto – by the participating bank. In the (understandable) desire to include as many potential borrowers as possible, there is a temptation to lower credit standards, eliminating such prerequisites as a year (or more) of profitable operations, accepting more leverage than prudent, and the like. These temptations should be stoutly resisted. The overarching goal, it must be remembered, is to produce a profitable, sustainable SME lending portfolio for the bank in order that it be committed to the undertaking in the future.

In order for commercial banks to operate comfortably in the SME lending arena, it is essential that lending costs be covered and that a reasonable profit is earned. Loading programs up with expensive, time-consuming secondary or tertiary activities involving bank personnel - however well-intended - will be unsustainable in the long run when government support ends. Examples would be accounting instruction or marketing seminars. It is possible, of course, to structure such interventions as part of a “value proposition” for certain “elite” SME borrowers, requiring them to pay a fee, and so on.

It is the writer’s conviction that SME lending programs should not lend to start-ups. To do so confuses investing and lending and breaks one of the rules fundamental to prudent banking practice: never accept a lender’s reward for an investor’s risk. Venture capital, angel investors, and crowdfunding are all potential sources of capitalization, in addition to the promoter’s and his family’s savings.
A Note on Marketing an SME Lending Program

With the two “plain vanilla” lending products, a term loan for fixed asset acquisition, and a (revolving) line of credit for working capital, it is possible for banks to craft what appear to be specialized financings for targeted groups of borrowers. The author was involved in one lending program from a commercial bank which marketed private clinics and hospitals. We developed a PowerPoint presentation which described financing for specialized medical equipment with repayment terms extending to five years. Once we had a few borrowers on the books, referrals to other medical professionals who attended our presentations produced a profitable market niche for the bank. The product was a simple term loan, but we were able to add a period of time upfront where we provided financing for the acquisition, installation and testing of the equipment (working capital finance in addition to the equipment finance), a grace period, then a repayment period determined by the borrower’s projected cash flows. This particular structure – a line of credit followed by a term loan – is useful in construction financing as well.

In another country, a bank I worked with attracted a few clients among private schools, in two cases financing new school buses. Our loan product was the plain vanilla term loan, marketed as a “loan for private schools.”

In both examples cited above, the associated current accounts were helpful in increasing our deposit base. In addition to the loan, the schools benefited from their ability to accurately track tuition payments by our assigning a particular current account for this purpose.

5. SME Lending in Asia

As is the case in many areas of the globe, SME access to finance is restricted in many Asian countries. In a survey carried out by the Asian Development Bank covering twenty Asian nations, loans to SMEs represent 18.7% of total bank lending (by value). In larger Asian economies, the percentage is higher, while in less-developed countries, it is lower. There is also an indication that the implementation of Basel III requirements has negatively affected SME lending: China, the Republic of Korea, India and Indonesia are cited as examples (Yoshino and Taghizadeh-Hesary, 2018).

Basel III is a voluntary global regulatory framework developed in 2009 in response to the financial crisis of 2007-8. It was designed to strengthen commercial banks’ capital structure and enhance their liquidity. Accordingly, reserve requirements on various types of lending were increased.

The UN’s Third International Conference on Financing for Development held in Addis Ababa in July 2015 addressed the potential difficulty compliance with Basel III requirements might cause SME (and microenterprise) lending in the developing world. The conference’s final report stated that:

“We acknowledge the importance of robust risk-based regulatory frameworks for all financial intermediation...(and) that some risk mitigation measures could potentially have unintended consequences, such as making it more difficult for micro-, small- and medium-scale enterprises to access financial services. We will work to ensure that our policy and regulatory environment supports financial market stability and promotes inclusion in a balanced manner....” (United Nations, 2020, pp.19).

The document goes on to suggest the utilization of “collateral substitutes” wherever possible and the reduction of capital requirements for microenterprises and SMEs.
Notwithstanding conference recommendations, a study conducted in 2018 by the World Bank concluded that Basel III accords had what the authors termed a “moderately negative effect” on SME lending. “The economic effect of Basel III implementation on SME access to financing in emerging market developing economies (EMDEs) can range between negative 0.244 and negative 0.593.” (Malecky, Fisera and Horvath, 2020).

Two Asian countries, Japan and the Republic of Korea have banks which are specifically chartered to finance SMEs: “Shinkin” banks in Japan are regional banks whose shareholders are SMEs. They are charged with lending to their shareholder banks, although they may extend up to 20% of their loans to non-member SMEs. The Industrial Bank of Korea, founded in 1961, is the nation’s SME bank, lending a total of $9.3 billion in 2015, representing 20% of total SME funding in the country.

The rest of Asia relies overwhelmingly on commercial bank lending, augmented by credit guarantee schemes.

**Three Exemplary Banks**

The following chapter explores in some detail the operations of three SME-oriented commercial banks located in extremely diverse markets, DBS Bank in Singapore, BRAC Bank in Bangladesh, and XacBank in Mongolia. Each has a product/service mix aimed at its indigenous SME population. Each has achieved a level of success that makes it a regional leader in SME finance. Together they reveal the ingredients that can be packaged to deliver excellent banking services to their core clientele. See Table 7.

**Table 7**

**SME Banks in Asia – Three Leaders, Selected Indicators**

<table>
<thead>
<tr>
<th>Name</th>
<th>Founded</th>
<th>Total Assets</th>
<th>Net Income</th>
<th>Branches</th>
<th>Employees</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBS</td>
<td>1968</td>
<td>$436.3 bn</td>
<td>$4.8 bn</td>
<td>250+</td>
<td>24,000</td>
<td>11,000,000*</td>
</tr>
<tr>
<td>BRAC</td>
<td>2001</td>
<td>$2.8 bn</td>
<td>$6,700,000</td>
<td>187**</td>
<td>8,160</td>
<td>1,300,000</td>
</tr>
<tr>
<td>XacBank</td>
<td>2001</td>
<td>$1.087 bn</td>
<td>$8,192,000</td>
<td>88</td>
<td>1,195</td>
<td>400,000</td>
</tr>
</tbody>
</table>


**Notes:**
*Including 240,000 customers in the Institutional Banking Group, which includes SME financing
**In addition, BRAC has 457 SME Unit Offices and 1,800 Remittance Delivery Points.

**DBS**

Singapore ranks fifth in the world in per capita GDP and fifth in gross national savings at around 46% of GDP. GDP is 75% services, and 25% industry. SMEs account for 48% of GDP, employ 65% of the workforce and constitute 99% of local enterprises.8

DBS was founded as the Development Bank of Singapore in 1968. The government, through its investment arm Temasek Holdings Ltd., maintains the largest shareholding in the bank, renamed DBS in 2003 to reflect its growing international presence. DBS is the largest bank in Southeast

---

8 For more details, see [https://www.uobgroup.com/](https://www.uobgroup.com/).
Asia: it operates in 17 Asian countries and maintains branch networks in India (33), China (9), Taiwan and Hong Kong (3).

Its claim to fame is digital banking. In 2016 Euromoney named it the “Best Digital Bank in the World.” In addition to banking services, banking platform customers may avail themselves of applications that combine all of their accounts at the bank, prepare their payrolls and track their working capital balances, and associated financing needs. Other citations, including “Best Bank”, were conferred on DBS, which received three such awards from The Banker, Global Finance and Euromoney in 2019.

DBS finances over 50% of Singapore’s SMEs, which, in turn, employ two-thirds of its workers. The bank offers a “suite” of products for SMEs, including foreign exchange management, insurance products, current accounts, multicurrency accounts, credit cards, investment services and fixed deposits. The bank offers a “logistics blockchain platform” providing SMEs with faster access to trade financing.

Its “enhanced working capital loan” is collateral-free, and available for amounts up to S$1,000,000 ($753,000). “Business Loans,” also collateral-free, are available in amounts up to S$500,000 ($376,000). Working capital loans as well as a revolving credit line require that the borrower be registered with local authorities, have at least 30% Singaporean and/or local resident shareholding, report annual sales of below S$100 million ($75 million), and have fewer than 200 employees. As with the Business Loan, the tenor is up to five years. How the five-year tenor for working capital loans is managed is not disclosed.

Other loan products include Supply Chain Financing, which provides loans of up to 70% of qualifying invoices, accounts receivable purchasing (factoring) of up to 90% of receivables’ value, and “block discounting” for automobile dealers and credit companies which provide in-house financing. Again, up to 90% of their invoices may qualify.

The majority of DBS loans are accessed online (52% of SME customers use digital banking), which means the bank uses various algorithms to ascertain creditworthiness. The bank calls its system “Analytics-Based Lending” which it terms an amalgam of traditional and non-traditional data sources. DBS is targeting more sophisticated SME clients in India and Singapore and saw increases in what it terms its “digiBank” business in these two countries by 96% and 75%, respectively, in 2019. The cost/income ratio of digital customers versus traditional customers is 20% better. Unfortunately, DBS declined to participate in our survey, so we were unable to obtain more detailed information on its lending protocols.

The bank’s Tier 1 capital adequacy ratio (capital CAR) for 2019 was 16.7%; non-performing assets were stated to be 1.5%. The figure for loans and advances was 1.3%, virtually identical to 2018’s result. The Basel III protocols require that the ratio Tier 1 Capital/Total Risk-Weighted Assets be 10% at minimum.
ESCAP’s MSME FINANCING SERIES No. 6

BRAC Bank

Bangladesh’s economy has grown by more than 6% each year from 2005 through 2019. During the first quarter of 2019, the growth rate was 7.3%, the seventh-highest growth rate worldwide. The Bangladeshi economy ranked 35th in the world.

The nation is classified as a low middle-income country, despite an estimated 24% of its population living beneath the poverty line. The garment industry dominates the manufacturing sector; over 80% of exports are textiles. SMEs account for 45% of manufacturing value-added, 31% of GDP and 75-80% of export earnings. They provide employment to 80% of those working in industry or 25% of the labour force.9

Founded in 2001, BRAC Bank has been dedicated since its inception to serving SMEs in Bangladesh. The bank operates 187 branches throughout this densely populated nation of over 163 million souls; in addition, there are 457 SME Unit offices and 1,800 Remittance Delivery Points (overseas workers’ remittances represent a very substantial portion of the country’s foreign exchange).

The bank is a publicly traded company, with general stockholders holding 55% of outstanding shares, and the BRAC Development Corporation 44%. Loans and Advances make up 72% of total assets, and of this amount, SME finance stands at 43.5%: as SME loans are “smaller ticket” items than corporate loans, this represents a substantial percentage of the total number of loans. BRAC has three divisions – SME, Retail and Corporate. The Retail Division accounted for 18% and the Corporate Division 38.5% of Loans and Advances.

The bank offers a variety of unsecured loans to SMEs, as well as larger secured facilities, the “TARA” women entrepreneurs' loan, construction loans and agricultural finance. On the liability side, it has two variants of current accounts including an interest-bearing current account called the “Prabti” and savings instruments (fixed deposits). SME customers total 310,000 and total disbursements during 2019 were $1.5 million. Over 3,000 employees serve in the SME Division of the bank.

The unsecured loan, called the “Anonno,” is available in amounts ranging from $3,500 to $29,000. Eligibility requirements are that the firm is in business for a minimum of three years and be registered with governmental authorities. The applicant must demonstrate sufficient cash flow from operations to repay credit facilities extended, and should own the business’s land, property and buildings (although these will not be taken as collateral).

The “Apurbo” secured SME loan can be for any amount from $12,000 up, depending upon the purpose, repayment capacity, and collateral. Loan structures include revolving credits for working capital, term loans for fixed asset acquisition and letters of guarantee. Maximum tenors are not disclosed. The same eligibility requirements apply for the Apurbo and the Anonno.

The “Shomriddhi” secured facility resembles the Apurbo but adds export-import financing through letters of credit and is secured by trust receipts of the goods financed.

---

9 For more details, see https://plandiv.portal.gov.bd/.
Just under 85% of BRAC SME loans are unsecured.

BRAC uses credit scoring as part of a process to determine risk profiles for smaller borrowers whose loans do not exceed $42,000 (Bangladeshi taka 3.5 million). Relationship Officers visit all applicants, make in-person checks on inventory and fixed assets, and construct pro forma financials on which they calculate various ratios. Their analyses are reviewed by credit personnel in field offices which approve smaller loans. Of the 456 unit offices BRAC operates, 180 of them have credit risk management teams. Only on rare occasions are loans referred to a higher authority for approval.10 The credit analysis and approval regimen is not automated and involves more than one site visit. Analytical formats cover the following risks:

- Industry and market analysis
- Related-party analysis
- Supplier/Buyer analysis
- Historical and projected financial statement analysis
- CIB report
- Recommendations as to loan structure and collateral
- Cross-border risk
- Environmental and social risk

Turn-around time is eight working days for unsecured loans, 15 for secured loans (from the date of a completed application).

SME loans are priced at 9% per annum, while the women’s loan is given a preferential rate of 7%. For secured loans, the rate drops to 3% p.a.

Through a network of agents located throughout the country and using the mobile platform bKash, a wholly-owned subsidiary, BRAC Bank is able to provide customers with accessible, convenient methods of making payments (and collecting loan repayments). The 500 Agents located throughout the country are involved primarily with account-related tasks. They also distribute proceeds of loans and receive payments.

BRAC Bank engages in the training of entrepreneurs. In 2019 it partnered with the UN’s Global Compact to offer training to SME owners and managers in its SME Toolkit.

Tier 1 capital to risk-weighted assets stood at 13.8 per cent in 2019. Overall non-performing loans were 4.99% of total loans and advances, with the SME NPL rate standing at 3.2% of portfolio.

---

10 Email from Syed Abdel Momen, Head of SME Banking, BRAC Bank 3/9/2021.
XacBank

Mongolia’s transition from a Soviet satellite state to a Western-oriented, democratic market economy is one of the great success stories of the post-Soviet era. This vast land is one of the most sparsely populated countries in the world, with a population of 3.2 million inhabiting a landmass of 1.5 million square kilometres and a population density of 2 per square km, larger than France, Germany and Spain combined. Thirty per cent of the country’s population are nomadic herders – the traditional occupation – while just under 50% of the population resides in the capital, Ulaanbaatar.

In addition to livestock (largely horses), the economy is based on mining, with mineral exports to neighbouring Asian nations (primarily China) accounting for the lion’s share of export earnings. SMEs contribute about 25% of GDP, employ 52% of the workforce, and constitute 99% of enterprises (IFC, 2021).11

XacBank commenced operations in 2001: the bank was formed as a merger between Mongolia’s two largest SME cum microfinance organizations, Goviin Ekhlel and X.A.C. Goviin had been founded with support from the US NGO Mercy Corps, and X.A.C. with support from the UNDP. XacBank’s creation represented the first time the Central Bank of Mongolia had issued a banking license to what had been non-bank entities.

XacBank started operations with the goal of establishing a presence in every province of Mongolia. The bank is a wholly-owned subsidiary of the TenGer Financial Group, whose principal shareholders include the IFC, EBRD, the Orix Corporation (a Japanese financial services group), the National Bank of Canada and Ronoc, a financial services and Fintech firm based in Dublin. In addition, XacBank lists as “funders and partners,” Swedbank, KFW, DFC (the US Development Finance Corporation), the Netherlands Development Finance Company (FMO), Triodos Bank, the Green Climate Fund, and the Asian Development Bank. XacBank today is Mongolia’s fourth-largest commercial bank. In 2012 it was the beneficiary of a $46 million syndicated loan led by the EBRD to augment SME lending funds and allow for longer tenors.

Credit scoring is used to assess credit risk on loans of up to $35,000 (100 million togrik), subject to review by a senior analyst. For amounts above this figure, a blended approach is employed, which includes financial statement analysis, cash flow generation, ratio analysis, a credit rating, sensitivity analysis, and a site visit.12 In the event, applicants do not have financial statements or their statements are judged to be unreliable, the bank constructs pro forma statements based upon information provided by the applicant. Larger SMEs are required to provide statements, however.

For loans up to $35,000 the bank uses an automated process featuring Business Process Management Software (BPMS). For larger loans, XacBank has created several Excel templates which guide analysts through the risk assessment process.

The bank offers a working capital loan (no maximum or minimum amounts are specified) to qualifying businesses under the following eligibility requirements:

11 The SME figure includes microenterprises (80%).
12 Email from E. Ulambayar, XacBank Head of Retail Banking 3/12/2021.
• The business must have been in operation for at least six months
• The business must be registered
• No previous “bad credit history”
• The business must maintain up-to-date accounting records. Documentary requirements include inter alia 1-3 years of financial statements, land ownership verification, copies of business permits and licenses, and documents pertaining to collateral taken by the bank.

The facility is available for up to three years and bears a monthly interest rate of 1.3 – 1.5% (15.6 – 18% p.a.) and a 1% service fee.

XacBank offers a term loan called an “Investment Loan”, available for periods of up to five years. Again, no minimum or maximum amounts are specified. Acceptable loan purposes include fixed asset purchase, purchase of land or property, construction, or “to provide additional funding for long-term working capital loans during the investment process.”¹³ Up to 24 months’ grace period is available.

The same rates and documentary requirements apply as are required for the working capital loan.

The bank offers a current interest-bearing account and the usual array of time deposits. There is a cash collection service, by which bank staff collect cash from specified customer locations and deposit it in their current accounts.

XacBank reported non-performing loans of 4.7% of its portfolio in 2019. The bank had a Tier 1 capital/Risk Adjusted Assets ratio of 12.0%.

These three extremely divergent operating environments have spawned DBS, BRAC Bank and XacBank, SME-specialized banks, each of which is a leader in its market(s). While adhering to the (relatively new) Basel III requirements, they have nevertheless sponsored successful SME lending efforts at rates significantly below those typically charged by Fintech firms.

As further evidence of the great divide in SME definitions, the example provided by these three countries is illustrative (Table 8):

Table 8
SME Definitions According to the Central Banks of Bangladesh, Mongolia and Singapore

<table>
<thead>
<tr>
<th>Country</th>
<th>Sales (USD)</th>
<th>Total Assets (USD)</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh (Small, manufacturing)</td>
<td>N/A</td>
<td>59,000 to 1,182,000</td>
<td>25 to 99</td>
</tr>
<tr>
<td>Bangladesh (Small, service)</td>
<td>N/A</td>
<td>5,900 to 118,200</td>
<td>10 to 25</td>
</tr>
<tr>
<td>Bangladesh (Medium, manufacturing)</td>
<td>N/A</td>
<td>1,182,000 to 3,547,000</td>
<td>100 to 250</td>
</tr>
<tr>
<td>Mongolia (All SMEs)</td>
<td>Up to 833,000</td>
<td>N/A</td>
<td>9 to 199</td>
</tr>
<tr>
<td>Singapore (All SMEs)</td>
<td>≤ 75,438,000</td>
<td>N/A</td>
<td>≤200</td>
</tr>
</tbody>
</table>

Source: Prepared by the author.

¹³ For more details, see [https://www.xacbank.mn/](https://www.xacbank.mn/).
6. Conclusion

To achieve success, an SME lending program must accomplish the difficult task of combining sufficient analytical rigour with a high degree of cost containment. The essential ingredient – financial or credit analysis – cannot be delivered without a level of automation that renders the entire exercise cost-effective. Banks must be able to record profits on the small ticket loans on which the “S” end of the SME spectrum relies. It’s not good enough to concentrate all of an institution’s efforts on the larger “M’s,” leaving their smaller compatriots out of the SME financing picture. And credit scoring, while a useful “sift,” should not supplant credit analysis. In this writer’s opinion, as a “go to” analytical resource, it is not likely to weather an economic downturn. The three essential components of a successful bank lending program to SMEs are shown in Figure 3.

Figure 3
Three Essential Components of a Successful SME Lending Program

Underlying the methodology outlined in these pages is a requirement that banks invest in credit training for all lending staff – head office and branch level – in order that a “credit culture” be instilled throughout the institution. Loan officers should know much more than what is contained in the online platform. They must be relied upon to ask pertinent questions (and perform additional measurements – ratios, for example) when they suspect these would throw needed light on a given credit. They need to understand what the platform contains and what it leaves out and record additions and corrections wherever required.

Beyond the need for credit training and a robust credit analysis regimen, the future clearly lies in increasingly more automated banking solutions. A 2017 survey of eight Asian markets conducted by Oliver Wyman noted that as many as 50% of SMEs surveyed would be willing to change primary banking relationships in order to obtain such digital improvements as online applications, cash management options and the like. The same survey noted that few banks were able to match services provided by Fintech companies. In addition to developing and enhancing their own digital capacity, alliances between Fintech firms and traditional banks may be a solution. The well-known US online lender Kabbage was acquired in 2020 by American Express (although it is worth noting that Amex did not acquire Kabbage’s loan portfolio as part of the deal!) (Oliver Wyman, 2018).
References


Annex: Bank Responses to Queries Regarding their Lending Processes

BRAC Bank

The point-to-point responses to your questions regarding SME lending are provided below for your perusal:

Q-1: Do you require financial statements from all applicants?

As per regulatory requirement, analyzing the financial statements, cash flows, income generation capacity, liquidity and leverage position of the borrowers; provide a clear understanding of borrowers’ financial capacity to repay the liabilities in time. Along with financial statement analysis, behavioral aspects of the borrower are considered to assess cottage and micro-segment customers. In BRAC Bank, the practice is in place to obtain financial statements which are in conformity with accepted standards. In compliance with the central bank's Internal Credit Risk Rating System (ICRRS), banks shall obtain audited financial statements (not older than 18 months) from borrowers having total loan exposures of more than 50 lac or 1 crore [for small manufacturing concerns]. With valid reasons, banks may accept unaudited financial statements from borrowers. It is also permitted to obtain unaudited financial statements for sole proprietorship and partnership concerns.

Among the SME customers of BRAC Bank, a majority portion are of a proprietorship nature, which usually does not prepare a formalized financial statement from appropriate authority. The financial information is stored in secondary forms like sales registers, invoices, delivery receipts, receivables books, stock registers and cost vouchers.

Q-2: If not, do you prepare pro-forma financials based on their inputs and the results of site visits?

In SME lending, the borrowers are usually classified as cottage, micro, small and medium as per pre-defined criteria provided by Bangladesh Bank (The Central Bank of Bangladesh) in terms of fixed asset, sales turnover, maximum loan amount and manpower of each individual SME borrowers. However, the cottage, micro and small segment usually are owned by a single person and do not prepare audited financial statements as it requires additional costs and functional activities. To determine the creditworthiness of SME businesses, the field marketing personnel known as Relationship Officers (RO) mandatorily visits every potential SME borrower, check the business activities, ascertain the stocks, payable and receivables position and finally construct a pro-forma financial statement to calculate different ratios (profitability, liquidity, leverage, activity and coverage) to determine the financial offerings. Later, the credit risk personnel known as Credit Analysts/Managers re-checks the given information by making visits to the SME borrowers and confirms the offering before every loan approval.

Q-3: Or...do you rely totally on a credit scoring approach?

The credit scoring approach is one of the evaluation tools to assess SME customers up to BDT 35 lacs for four distinct segments (i.e. Grocery, Hardware & Paints, Furniture and RMG) for lending. But the final approval is not limited to the result of such scoring.

Q-4: If you use a blended approach to credit analysis, could you describe it?
We conduct other financial assessments and qualitative judgments to identify potential borrowers; which include the following but are not limited to,

- Borrower analysis
- Industry analysis
- Market analysis
- Related Party analysis
- Supplier/Buyer analysis
- Technical Risk analysis
- Historical Financial analysis
- Projected Financial analysis
- CIB report
- Account conduct
- Loan structure to be provided
- Security Offering
- Liabilities with other FIs
- Cross Border Risk
- Environment & Social Risk
- External Credit Rating

With the outcome of all these evaluations, the final decision is taken; where, a high credit-scored customer could get rejected on these grounds and vice versa.

Q-5: To what extent is your credit analysis and approval methodology automated?

The credit analysis and approval methodology of SME Banking has a prescribed format to be followed by our underwriting team. Depending on business complexity, loan amount, security & collateral type; some additional assessment techniques are included with regular practices.

Q-6: Are credit approvals centralized?

It follows a mixed approach depending on the loan size. Unsecured (mortgage free) proposals are approved by the field office in a decentralized manner. While the secured (mortgaged) proposals are approved in a centralized manner. BRAC Bank SME team manages 456 offices nationwide to serve the SME borrowers, out of which, the credit risk management (CRM) team are stationed in 180 units covering the geographical periphery of all unit offices to ensure timely and seamless loan approvals. However, in case of loan approvals which requires discretionary approvals for exception in lending terms, it is seldom required to obtain approvals from higher authority.

Q-7: What is the turn-around time on SME loan applications?

On average, unsecured loans (Mortgage-free) have a turn-around time of 08 working days; and secured loans [mortgaged] have a turn-around time of 15 working days. Turn-around time starts from the day a relationship officer submits loan applications to the credit risk team to the day of disbursement of the same.

Q-8: What are the functions and responsibilities of the SME Unit offices? Of the Agents (in relation to SME finance)?
BRAC Bank has 456 SME unit offices all around Bangladesh, which is designed to accommodate the relationship officers to cater mainly for the cottage, micro and small segment. The functions of unit offices are:

1. Share product features among the visiting customers
2. Answer queries to the different customers
3. Prepare loan proposal and collect necessary documents of the enterprise
4. Plan to achieve monthly, quarterly & yearly targets of loan disbursement, collection & deposit, and Portfolio quality
5. Maintain and preserve office files and registrars
6. Prepare a visit plan for the enterprises. Analysis of the financials and non-financial position of enterprise, entrepreneur and guarantor as well as recommended for approval or rejection of loan proposals
7. Co-ordinate with head office officials and other related departments/branches

Along with SME unit offices, BRAC Bank currently has more than 500 agent banking outlets through which the following SME services are being performed:

1. Account opening (Current A/C, Monthly Savings & Term Deposit)
2. Cash deposit & withdrawal
3. Fund transfer (BBL to BBL, BEFTN & RTGS and e-Token)
4. Insurance premium collection
5. SME loan disbursement and repayment
6. Agricultural loan disbursement and repayment
7. Secured Overdraft (SOD) request
8. Debit Card and Cheque Book Issuance
9. Balance inquiry and Account statement
10. Internet Banking & SMS banking

Q-9: How do you keep transaction costs reasonable? Do you limit borrower visits?

In the process of SME financing, the major transactional cost includes client assessment & acquisition cost, which incurs before the disbursement of the loan. To some extent, this cost does not get compensated, and the loan processing becomes unsuccessful due to proposal rejection. It is quite challenging to keep the transactional cost in the limit as SME financing requires a high attachment of Relationship Officers in the market. To assess an SME customer for providing financial service requires conducting frequent visits and establishing sustainable connections which will help to ensure the repayment. Therefore, the business team remains open to make ample market visit. But to restrict the cost, the conveyance allowances have an upper limit that ROs cannot cross while submitting their bills. In addition, the underwriting visits are conducted in a synchronized way to increase efficiency while visiting and to keep the costs reasonable.

XacBank

Q-1: Do you require financial statements from all applicants?

- Financial reports of mid-sized SMEs tend to be accurate, so it is required from all applicants
- Even though the Bank receives financial reports/statements from SME and individuals, their statements are mostly incomplete or rough; therefore, they do not qualify for financial statement standards. So, it is really difficult for loan officers to analyze their financial raw data in order to determine applicants' potential/capability.
Q-2: If not, do you prepare pro-forma financials based on their inputs and the results of site visits?

- Loan officers receive financial information those SME has supplied. Based on that information, financial statements have been compiled.

Q-3: Or...do you rely totally on a credit scoring approach?

It depends on the volume of lending:

- Up to 100 MLN MNT: uses credit scoring – but still requires review by senior analyst
- If more than 100 MLN MNT: several financial analysts are used

Q-4: If you use a blended approach to credit analysis, could you describe it?

Basically, loan officers use the following research and analysis, which are:

- SME lending risk rating
- Cash flow analysis
- Ratio analysis
- Sensitivity analysis
- Financial statement analysis
- Site visits

Q-5: To what extent is your credit analysis and approval methodology automated?

It depends on the volume of lending same as question №3.

- Up to 100 MLN MNT: credit analysis and approval processing has been automated. Bank uses Loan origination, BPMS subsystems in order to calculate and approve
- More than 100 MLN MNT: In order to analyze credit potential, HQ has created several excel templates and guidelines to analyze financial data and provided them to branch loan officers. The approval process has been automated through the Redmine subsystem

Q-6: Are credit approvals centralized?

- Branch managers approve any loan request within limitations within which the maximum loan amount is differently approved for each branch
- HQ approves the rest of the loan, which amounts above than branch approval limitation

Q-7: What is the turn-around time on SME loan applications?

- Micro loan-1year 4 months
- SME-1 year 6 months

Q-8: What are the functions and responsibilities of the SME Unit offices? Of the Agents (in relation to SME finance)?

Loan officers have the responsibility to control any loan once every 6months.
Q-9: How do you keep transaction costs reasonable? Do you limit borrower visits?

It fits Mongolian circumstances due to several financial companies using it. However, the government is pushing the legal entities to have one financials through enforcement of taxation legislation.

- Mongolian SMEs' have more than one financial statement for tax, Executives and banks, SMEs should have standards for booking in order to define the capability of lending.

DBS

DBS declined to participate in our questionnaire, informing us that the information requested was proprietary.