Credit Scoring: An Effective Way to Ensure Availability of Timely and Adequate Credit to Micro and Small Enterprises (MSEs) *

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Ms. Jennifer Isern, Manager, South Asia Advisory Services, International Finance Corporation (IFC); Shri S. K. Dubey, CMD, Canara Bank; Shri H. S. U. Kamath, CMD, Vijaya Bank; Smt. Archana Bhargava, CMD, United Bank of India; Shri Ashwini Kumar, CMD, Dena Bank; Shri S. R. Bansal, CMD, Corporation Bank; Shri Sushil Muhnot, CMD, Bank of Maharashtra; Dr. Deepali Pant Joshi, Executive Director, Reserve Bank of India; Executive Directors and other senior officials from various commercial banks; Mr. Suresh Sankaran, Mr. Neil Ramsden and Mr. Cameron Evans, the resource persons from IFC; colleagues from Reserve Bank of India; ladies and gentleman! It is, indeed, a pleasure for me to be amidst you this morning to deliver a keynote address on a very topical issue of ensuring availability of timely and adequate credit to Micro and Small Enterprises (MSEs). It is a subject that is very close to my heart and hence, I am extremely happy to flag off this workshop on credit scoring models which is fundamentally aimed at capacity building in the banking sector by imparting practical know-how to people who are expected to use it in their day-to-day operations.

2. As you are all aware, fostering a dynamic Micro, Small and Medium Enterprise (MSME) sector for sustenance of economic development is a priority for the policy makers, in both developed and emerging economies. In India too, MSME sector plays a pivotal role in generating employment, increasing cross-border trade and fostering the spirit of entrepreneurship. The sector contributes to economic development in a variety of ways such as creating employment opportunities for rural and urban population, providing goods and services at affordable costs by employing innovative solutions and supporting the export initiatives of the country. In fact, it is increasingly being recognised by the policy makers that if India has to regain its high growth trajectory, it needs a vibrant MSME sector. However, it is deplorable that despite recognising a widespread need for supporting the sector, the progress on the ground is extremely lackluster and the extent of financial exclusion in the sector is very high. Part of this reluctance of the formal financial sector to reach out especially to the MSEs arises from their own inability to assess the potential of companies in this sector. It is in this context that credit scoring models can prove to be a valuable tool in better understanding and appraising the sector. As you might have discerned from the schedule, the purpose of today's training workshop is to drive home the advantages of credit scoring model in decision making for lending to the SME sector and the bevy of experienced practitioners from IFC would hold technical sessions through the day to help you understand the nuances of the process. In my address today, I intend to highlight the problems faced by the sector insofar as accessing institutional finance is concerned, give an overview of the credit scoring model and attempt to dispel some common misunderstandings surrounding credit rating and credit scoring models.

3. The statistics compiled in the Fourth Census of MSME sector revealed that only 5.18 per cent of the units (both registered and unregistered) had availed of finance through institutional sources, 2.05 per cent had finance from non-institutional sources and the

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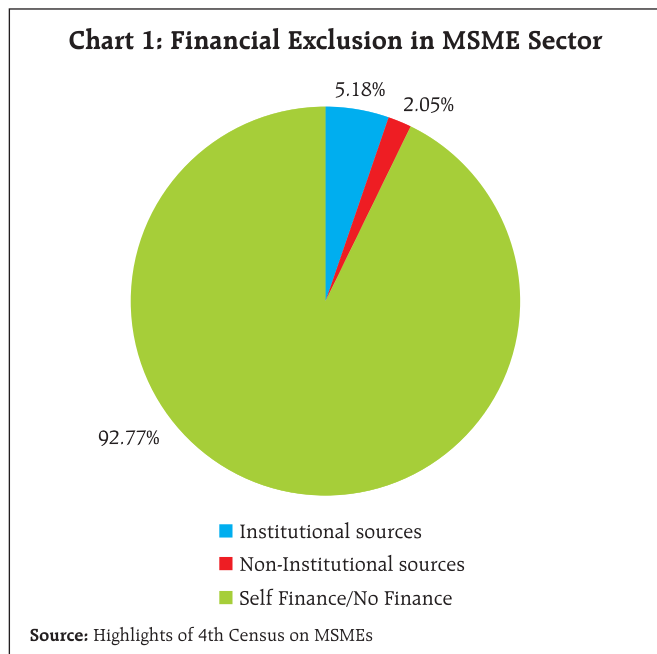
Chart 1: Financial Exclusion in MSME Sector



Source: Highlights of 4th Census on MSMEs

majority of units *i.e.,* 92.77 per cent had no finance or depended on self finance (Chart 1).

A. Constraints in access to finance by Micro and Small Enterprises

4. As I mentioned earlier, the sector has been facing constraints in accessing finance from the banking sector. This has also partly to do with inadequate penetration of banking facilities in the remote unbanked/under banked areas that the RBI is encouraging banks to bridge through structured Financial Inclusion Plans. Another issue which is a constraining factor is the pricing of credit. In our view, the credit pricing for the MSE sector is not very transparent and also not very affordable. A sample study of the median interest rates charged to borrowers by select major banks as on March 31, 2013 worked out to 13 per cent.

B. Lack of alternate source of finance

5. The ability of MSMEs (especially those involving innovations and new technologies) to access alternate sources of capital like equity finance, angel funds/risk capital is extremely limited. At present, there is almost negligible flow of equity capital into this sector, which poses serious challenge to development of knowledge-based industries, particularly those that are promoted by first-generation entrepreneurs with the requisite expertise and knowledge. Venture/risk capital is, therefore, often a more appropriate financing instrument for high-growth-potential and start-up SMEs. However, access to this type of financing is often not available to them. In the absence of alternate sources of finance, the SMEs' reliance on debt finance is very high. The availability of debt finance, however, is not adequate as viability of these small units is a major issue. Besides, the high reliance on debt, combined with high cost of credit adversely impacts the financial viability of start-ups, particularly in the initial years, thereby threatening their long-term survival and sustainability.

C. Constraints of banks in lending to the sector

6. One of the major challenges faced by the MSMEs and more particularly, the micro and small enterprises, is access to timely and adequate credit from the banking sector. The lenders are reluctant to service the MSEs for a number of reasons, the foremost of which emanates from a general perception amongst banks that the credit risk in lending to small and medium borrowers is very high. This, in itself, is a wrong notion that I have been trying to dispel through my presentations supported by hard data. While the headline numbers of non-performing assets (Gross and Net NPAs) are higher in this segment, if one reckons the extent of restructuring and write-offs that are resorted to in the medium and large borrower segments, the credit risk would appear to be much lower in the MSE sector. A comparative table indicating the extent of NPAs, restructuring and cumulative write-offs in micro and small *vis-à-vis* medium and large segments during the last five years is given

below:

Table 1: Impaired Assets Ratio

(Per cent)

Segment	Mar-2009	Mar-2010	Mar-2011	Mar-2012	Mar-2013
Micro+ Small	10.7	10.6	9.4	9.7	10.6
Medium+ Large	7.8	9.4	8.0	11.2	14.8

Impaired Assets ratio = (GNPA + Restructured Standard Advances + Cumulative write off) to (Total Advances + Cumulative write-off)

Table 2: Restructuring in MSE Segment

(Per cent)

		Mar-2009	Mar-2010	Mar-2011	Mar-2012	Mar-2013
Micro + Small	Gross NPA Ratio	3.63	4.29	3.96	4.44	5.19
	Rest Std Advs/Total Gross Advs	2.99	2.67	2.05	1.69	1.68
Medium + Large	Gross NPA Ratio	1.36	1.60	1.37	2.22	3.25
	Rest Std Advs/Total Gross Advs	4.80	6.39	5.04	7.52	9.80

The data clearly highlights the fact that in the recent scenario of rising impairment of assets in the banking sector, it is the MSEs that have demonstrated better credit discipline resulting in lower impairment.

7. The other reasons why MSEs are regarded as high-risk is on account of insufficient assets and low capitalisation, vulnerability to market fluctuations and high mortality rates. Information opacity arising from MSEs' lack of accounting records, inadequate financial statements or business plans also makes it difficult for potential creditors to assess the creditworthiness of MSE applicants. Besides, high administrative/ transaction cost of lending small amounts also queers the pitch for banks insofar as MSE financing is concerned. Notwithstanding the merits of the reasons mentioned above, I would say that a major constraint in the banks' lending stems from the fact that the existing system of banks' credit appraisal and related processes are not geared to appraise the financial requirements of MSE sector.

8. Nonetheless, over the years, there has been a significant increase in credit extended to this sector by the banks. As at the end of March 2013, the total outstanding credit provided by all Scheduled Commercial Banks (SCBs) to the MSE sector stood at ₹6,847 billion as against ₹5,276 billion in March 2012, registering an increase of 29.77 per cent. Despite the increase in financing to the sector there is still a considerable credit gap which needs to be bridged. In terms of the Report of the Private Sector Investment for MSME Sub Group under Working Group for the 12th Five Year Plan (2012-2017) the credit gap as a percentage to total demand is estimated at 56 per cent in 2013-14 for the MSME sector as may be seen from the table below:

Table 3: Estimated Outstanding Credit Demand and Supply of MSMEs

(₹ crore)

Year	Total Demand	Total Supply	Credit Gap in absolute terms	Credit gap as per cent of total demand
2010-11	20,92,500	7,37,161	13,55,339	65
2011-12	23,08,384	8,74,482	14,33,902	62
2012-13	25,41,574	10,38,948	15,02,626	59
2013-14	28,03,628	12,37,539	15,66,089	56
2014-15	30,89,863	14,77,928	16,11,935	52
2015-16	34,05,845	17,69,659	16,36,186	48
2016-17	37,57,755	21,24,644	16,33,111	43

Source: Report of the Private Sector Investment for MSME Sub Group under Working Group for the 12th Five Year Plan (2012-2017).

9. In the absence of alternate source of funding for the sector, the role of banks is very crucial in bridging this funding gap. In this context, it is important for the banks to look beyond their existing customer base and the large corporates and to reach out to the vast number of micro and small enterprises which are presently deprived of bank credit. Alongside extending the reach of their banking services, there would be a need to improve and customise the products offered, fine tune the pricing aspects and enhance the quality

and efficiency of services. For this, banks need to have a proper business plan and delivery model that would harness the benefits of technology. This would help in planning product delivery and building lasting customer relationships which will translate into higher revenues. The costs of banking transactions need to be dramatically reduced just as in so many other fields such as telecom, after the advent of technology.

D. Need for alternate appraisal techniques

10. Having appreciated the criticality of the sector in terms of its contribution to employment generation, manufacturing and exports, it is important for us to ensure that lending to the sector is appropriately stepped up. Here, we need to appreciate that the credit process in case of micro and small entrepreneurs cannot be identical to that of large corporations, where the borrower is able to provide detailed information about business plans and the firm's financial statements and the lender carefully reviews the data using analytics that are time-consuming and expensive. In view of the relatively small size of the loan, banks do not find it worthwhile to conduct an elaborate appraisal of SME credit proposals both in terms of value and profit. Therefore, in order that the banks can quickly conduct appraisal of SME loan proposals without expending too much resources, it would be imperative to ensure the efficiency of the appraisal process. An important dimension to efficiency in the context of lending decisions is the speed with which any individual lending decision is taken. Efficiency is improved by better evaluation of future payment performance so that the lender is able to choose whom to accept and whom not to accept.

11. Financial institutions in the developed countries use a number of different lending techniques to address this challenge and provide funding to small firms. The banks in these countries use a version of a computerised loan-evaluation system, referred to as **credit scoring** to assess would-be borrowers. The credit scoring approach, which is based on use of computer technology and mass production methods, was originally designed to handle consumer loans, but are now being used effectively for lending to small businesses by predicting their potential loan delinquency. Credit scoring offers a modern alternative for the traditional method of evaluating loans for small businesses where loans were approved on the basis of the banker's qualitative judgment and the financial condition carried significant weight in the appraisal process.

12. With a view to expediting the flow of credit to the MSE firms, the RBI, as a proactive measure, issued guidelines in May 2009, advising banks to start using scoring models for making lending decisions in case of all advances up to ₹2 crore. However, despite, our instructions having been issued nearly five years back, we find that use of credit scoring model in the real sense has not really taken-off in India. Our assessment is that perhaps the lack of conceptual clarity on the subject could be one of the reasons for banks' reluctance in using the credit scoring model for making MSE lending decisions. In fact, very often credit scoring is misunderstood or confused with credit rating. In the next segment of my talk today, I would, therefore, attempt to answer three questions *viz.,* What is credit scoring? How it works? And what are its benefits?

E. What is Credit Scoring?

13. Credit scoring is a statistical technique that combines several financial characteristics to form a single score for assessing a borrower's credit worthiness. The score does not predict a company's *ability* to pay, but rather its *willingness* to pay in a timely fashion.[1] The probabilities of

[1] Credit Scoring and the Small Business: A Review and the Need for Research (Longenecker, Carlos W. Moore & J. William Petty).

delinquency, as estimated by the model, are based on the analysis of previous applicants with similar characteristics. Credit scorecards are 'tools used to predict the behavior of new applicants based on the performance of previous applicants' (U. S. Comptroller of the Currency, 1998). Scorecards can also be used to predict the performance of existing accounts, based on past experience of accounts with similar characteristics.

14. Credit scoring is a model applied by banks in their assessment and approval or decline of the loan requests by SMEs. As there is a strong link between the payment behavior of the business owner and that of the business, SME credit scores usually include financial characteristics from both the business and the business owner. Credit scoring is based upon information like how the repayment of the previous loans has gone, what is the current income level of the enterprise, what are the outstanding debts, if any? It focuses on the credit history of the enterprise. As part of the process, the lenders see whether the enterprise/business owner has the reliability and honesty to repay the loan. It also examines how the enterprise has used credit before, its record for repayment of bills, including utility bills, how long the enterprise has been in existence, assets possessed by the enterprise and sustainability and viability of the activities that the unit is engaged in. Credit scoring model draws inputs from historical information on the performance of loans with similar characteristics.

Background of Credit Scoring

15. Credit scores have been widely used for many years in consumer credit markets *e.g.*, mortgages, credit cards, and auto loans. The model has facilitated lending procedures leading to availability of low cost credits and faster decision making yielding significant growth in consumer credit availability. Owing to the similarities of the small business in terms of being individual centric, the principles utilised for making lending decisions to individual borrowers under the credit scoring model were extrapolated to meet the credit requirements of small businesses. In the mid-1990s, Fair Isaac and Company introduced one of the first credit scoring models developed exclusively for SMEs, the Small Business Scoring Service (SBSS). Since then, many SME banks in the U. S. as well as in Canada, the U. K. and Japan, have implemented some type of credit scoring for SME borrowers.

Difference between credit scoring and credit rating

16. Quite often, I have seen bankers talking about credit scoring and credit rating in the same breath. Therefore, before I move any further, let me attempt to clarify the difference between credit scoring and credit rating. I would like to emphasise that these are two entirely distinct concepts and to be employed in distinctly different scenarios. So what are these differences? Credit scoring is a statistical technique that combines several pre-determined characteristics to form a single score to assess a borrower's credit worthiness. The score allocated to any application is the sum of the appropriate weights given by the values that the included characteristics take for that application.

Any two identical applications will always receive the same score. Credit rating, on the other hand, is based more on the experience and judgment of the credit officer and uses financial indicators as key. The objective of scoring is to replicate manual analysis and approval of loans at a lower cost, with greater speed, while the use of credit rating is reliant on manual analysis by credit officers to supplement the rating provided by the tool.

17. To put it simply, credit scoring uses a retail lending approach to credit screening/decision making and is recommended for smaller ticket size loans, where adequate reliable financial data about the

borrower is not available. Credit Rating, on the other hand, is a more appropriate tool for larger, mid-segment or corporate loans which have relevant financial data/business plans that provide the basis for further credit analysis and information. Again, credit scoring is usually a 100 per cent automated mechanism for screening loan applicants on the basis of a pre-defined set of parameters while credit rating is a more subjective and manual method for determining a borrower's ability to repay, based on a pre-determined set of criteria. Further, credit scoring enables clear decision matrix like immediate approvals, declines or gray area loans, which can be reviewed in greater depth. Declined loans are 'knocked out' quickly while strong proposals get quick approval. Additional assessment, if any, would only need to be made in respect of gray area loans or proposals which are neither an unqualified 'yes' or an unqualified 'no'. On the contrary, credit rating requires a similar level of credit analysis for all loan applications and is more comprehensive in nature, hence increasing the transaction cost per loan.

F. How Scoring Model works?

18. The objective of a scoring model is to use a relevant and representative sample to measure loan performance and then develop characteristics that predict performance. The resulting model is integrated into the decision making process. A scoring model applies different weights to the characteristics used to predict the performance. The weights, or values, measure the influence of that characteristic on the outcome. The weights and the level of influence are determined by statistical analysis. Only those characteristics that exert a 'significant' influence are included in the final model. The score allocated to any application is the sum of the appropriate weights given by the values that the included characteristics take for that application. Under this model, any two identical applications will always receive the same score, unlike in the manual underwriting where the decision could change from one lender to the other or also by the same lender depending on the interpretation on a given day.

G. Benefits of Credit Scoring

19. When used appropriately, credit scoring can benefit multiple stakeholders, including lenders, borrowers, and the overall economy. For the lender, scoring leads to process automation which facilitates process improvements leading to many by-products such as improved management information, control and consistency. It also increases the profitability of SME lending by reducing the time and cost required to approve loans and increasing revenues by expanding lending opportunities as lenders can safely approve marginal applicants that an individual underwriter might reject. International evidence has shown that credit scoring can assist in overcoming the inherent benefit/cost trade-off that banks face when deciding whether or not to invest in obtaining information regarding a potential borrower. A study that was meant to test the credit scoring situation in US estimated that the cost of evaluating micro loan applications in the US using credit scoring was reduced to around US$100 compared to a range of US$500-US$1,800 prior to the introduction of credit scoring. The time saving involved meant that banks could focus more time on marginal applications, existing loans that are showing signs of distress and processing more loan applications. Use of credit scoring has also meant that the marginal benefits of taking and maintaining collateral are not justified for small loans.

20. The Bank of England has also acknowledged that there is some evidence of banks being more willing to lend on an unsecured basis when using credit scoring, which potentially improves the access to bank finance for very small and start-up Small and Medium Enterprises.

21. For the borrower, the benefits from credit scoring include increased access to credit and, in some cases, lower borrowing costs. In its study of SME credit scoring's impact on access to credit, the Federal Reserve Bank (FRB) of Atlanta found that, in general, the use of credit scoring increased the amount of credit banks extended to the Small and Medium Enterprises. It found that banks using scoring were more likely to lend to the Small and Medium Enterprises that lacked sufficient financial information for approval through traditional underwriting methods. Presumably, this is due to the inclusion of the business owner's personal information in the scoring process. The study also found that banks using scoring were more likely to lend in low-income areas, a fact it attributed to greater objectivity in the underwriting process.

H. Conclusion

22. Before, I conclude let me re-emphasise that given the extent of exclusion in the SME sector and the criticality of the sector for the economy, banks urgently need to step-up lending to the sector. For evaluating loan proposals and for facilitating SME financing, banks would need to employ low cost and quick decision making alternatives. The use of credit scoring models can go a long way in facilitating lending decisions by reducing costs and increasing service levels, which can deliver great benefits for both the lenders and MSE borrowers.

23. I do hope that the technical session by IFC resource personnel would help clarify your doubts about the credit scoring model and encourage you to adopt a suitable model which would help accelerate credit flow to this sector. Like all new concepts, there needs to be a buy-in of the concept at the Top Management level and today's conference is an attempt in that regard. I believe by the end of today's conference, you would have ample clarity about the concept and usage of credit scoring model in financing to the SME sector. The purpose of organising the Conference would have been well served if we are able to bring about a change in mindset and willingness of the banks about the way they view SME financing. If banks consider lending to SMEs to be a viable business proposition and show the willingness and determination to expand credit coverage to this sector, then credit scoring models can be employed effectively to achieve this objective in a meaningful way. This promises to be a win-win proposition for all the stakeholders: the small and medium enterprises, the lending financial institutions and the overall economy. I once again thank the IFC resource personnel who have enthusiastically supported our endeavour and wish you all a successful deliberation.

Thank you!

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