Focus on Credit Risk of Micro and MSME Segments in India

Neha Patvardhan, Smita Santoki

Abstract: This paper focuses on Credit risk from both the Macro and the micro level of MSME and SME segments in India. The authors have identified qualitative factors responsible for the rising rate of default in the micro/sme segment. These factors got supported by the literature review also. These factors are namely: Diversion of funds by promoters.

- Industrial sickness
- Low technology innovation.
- Failure by promoters to bring in capital.
- Inadequate product branding and marketing tie ups.
- Under finance by banks.
- Delay in receiving payments from corporates.
- Other reasons (legal, statutory, environmental)

Apart from these factors, there can be many other factors that may play an inherent part in giving us a different picture; however; for our paper we have considered these important and common factors as a questionnaire for the primary data and analysed the same using the factor analysis of SPSS. The entire concept of revival or mitigating the financial risk or issues for default revolves around the policy where in the lender acts as a strategic investor. One of the major aspects for the entire model to be sustainable is that the risk mitigation strategies should be properly monitored and the list should be updated as and when new challenges pop up. The macroeconomic risks should also be closely tracked and properly monitored so that if such risks like with respect to some statutory clause’s like environmental clearances, geographical issues exist it’s better not to go in for revival for those firms no matter how feasible it might look.

I. INTRODUCTION

“The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 in terms of which the definition of micro, small and medium enterprises is as under”: “Enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:” “A micro enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 lakhs;” “A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakhs but does not exceed Rs. 5 crores;” “A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore. In case of the above enterprises, investment in plant and machinery is the original cost excluding land and building and the items specified by the Ministry of Small-Scale Industries” the MSME sector in INDIA is growing at a steady pace of around 10% approximately. The MSME sector contributes to about 8% of the India’s GDP and around 32% of the gross value added (GVA) product but according to the Economic Survey of 2017-18 only 17.4% of the total credit disbursed by the financial institutions goes into the micro and SME segments. The MSME sector remains significantly under-penetrated on the organized lending front. Out of the over 51 million MSME units, only 5 million have access to formal credit. A huge credit gap thus exists in these sectors which the various Financial Institutions like the banks and the NBFC’s need to fill in as there is huge potential for the commercial lending industry. The current NPA fiasco has reduced the lending ability of the public-sector banks and even the NBFC’s and other agencies are looking at their delinquency levels to reduce their lending. The credit risk analysis of these unorganized sectors by means of analytics can be a boon to such agencies whose primary motive now is to create a risk rating framework based on past records, financial ratios and analytics to guide them whether it’s feasible enough to lend to these sectors.

The M-SME sector has the lowest cyclical delinquency rates and the highest growth rate from the point of view of the credit where the offtake is the largest in the entire segment. If we want to analyze the sector attractiveness inside the MSME sector there are many such units that maybe the best from the profitability perspective of the lenders like the banks and the NBFCs in general so as to say.

- The leather, plastic and the rubber sector seem to be one of the safest bets for the lenders like the PSB banks who are right now suffering from the high delinquency levels and under the PCA of the RBI. These sectors have the lowest npa rates (9 to 12%) and one of the highest credit growth(8% to 12%)
- Next in line we have the construction sector where also the risk is fairly low in terms of the net default exposure. These sectors have less than 10% net NPA exposure and have less regulatory complexities are compared to the other heavy engineering sectors.
- The auto ancillary sector also would be an attractive sector to pump in funds as they are growing at a faster rate and have less than 10% NPA and moreover the auto industry is also showing signs of recovery and the government of India’s 2020 automotive plan the path is quite good.

These are the few sectors within the MSME which looks quite prudent enough for lending but what about the sectors which are already reeling under the heavy pressure of default and as a result the lenders have stopped lending to such units like mining sectors (NPA>12%), the small-scale gems and jewellery sectors

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Dr. Neha Patvardhan, Finance at Symbiosis International Deemed University, Pune, India. neha.patvardhan@sib.ac.in

Prof. Smita Santoki, International Business at Symbiosis International Deemed University, Pune, India. smita.santoki@sib.ac.in
We need to analyse the reasons for default for such sectors whether they are wilful defaults, circumstantial defaulters and try to find out the key factors for their default. The credit risk analysis and modelling through the use of analytics can be used as a measure to match the qualitative reasons for default with the most prominent quantitative factor i.e. the risk factors.

The MSME sector is poised for sustainable growth in the coming years. The government is pushing for the inclusive growth in these sectors through a plethora of plans like the MUDRA scheme, PMEGP, CGTMSE, 60-minute bank loans of 1 crore for these MSME as well as the private banks are also putting much effort in promoting the small business banking loans for these entities. The micro and MSME are essentially the backbone of the large scale corporations and if the credit risk is not properly factored in by the lenders then it may lead to default by the entities alongside the NPA of the banks. The banks are already under the watchful eyes of the RBI due to their huge 6 distressed assets and hence are reluctant to lend to these entities which do not have a formal exposure or not lend.

II. LITERATURE REVIEW

The objective of this dissertation is to analyze the various micro and MSME segments in India based on its risk exposure to various financial institution’s and try to determine the credit risk that the institution faces while lending to such entities in lieu of the NPA issues currently plaguing our entire banking and finance sector. The high cost of credit coupled with lack of sources to formal credit is one of the major issues plaguing these entities which needs to be addressed. It affects their performance more than the large firms. Information asymmetry is one of the major reasons where these MSME suffer from the lack of funding. A more proactive part needs to be undertaken by the credit rating agencies as they will essentially be the point of contact by the lenders to gather information. Credit Rating Agencies help the financial Institution’s in a couple of ways. (1) formal audited financial statements of these entities (2) Reduction in risk of default and probability of loss for the banks, NBFCs.

The determinants of the credit risks of the Vietnamese commercial banks also gives key insights of the risk metrics and the factors which play an important factor in determining credit risk.

1. Bank Specific: the market share and the bank size in some case negatively impacts the future credit risks. The ineffective use of capital, credit management by the team are some of the reasons for credit risk.

2. Macro Economic factors: The GDP growth levels have a direct impact on the levels of the credit risk.

3. The real lending rates, the management team and the credit risks are somewhat not linked as found out from the research papers.

The main types of models which are used in default prediction and which are also essential in finding out the key factors for the credit risk modelling and assessment. They are usually done using the following ways

2. Statistical models.

3. Hybrid models.

III. OBJECTIVES & HYPOTHESIS

This study will essentially try to ascertain a risk rating model for such entities using analytics so that the lending agencies have better decision-making ability to disburse loans. We will try to find out on what factors do the credit risk actually depend on using SPSS as a means for analysis and for summarizing our conclusions both from the CDR (corporate debt restructuring), SDR (strategic debt restructuring) cases and the outcomes from the SPSS.

The entire objective it to do a factor analysis of the reasons of default for these micro and SME entities and try to gauge what are the most important factors which leads to default or high delinquency levels among such entities.

The factor analysis will help us find out the key issues of why such entities are defaulting and then we also want to find out the qualitative aspects of default. The factors which have the highest weightage and matches the maximum number of times with the qualitative data and be assumed to be one of the most essential reasons for default and hence should be included in one of the factors by the banks and the nbfc's while furnishing out funds for loans. This study would also seek to help the credit rating agencies in understanding the perspective from all the 3 players in the loan disbursal process i.e. the lenders, the msme sectors and even the rating agencies who actually would require inputs from these sectors to create a sort of a rating database for future references by other lenders. In other words, let us assume that if one of the reasons for defaulting is the diversion of funds, then if the qualitative data also implies that in some way, we can easily recommend some strategic solution in order to curb this menace. The analysis of the credit risk can essentially be done through the factors which cause the company to default and work our way through the end result rather from a top to bottom approach. So, in short, my objective of this study would be to find out the issues through the use of analytics to key in the major ones and accordingly devise a strategy to overcome these issues if possible else create a flowchart where if some issues can lead to defaults from the very start then better to cut exposure or not lend altogether.

The various research papers in the field of issues in msme and SME financing all talk about the reasons but there is a research gap using factor analysis to actually find out whether there is some correlation with other factors which may not be visible by general statistical tools. So, for instance lack of technological innovation or poor product marketing of these entities may lead to lower margins, lower sales forecast eventually leading to defaults. Thus, the various factors can essentially be divided into 2 separate groups:

- The financial or the financing factors which may be the reasons for default for these entities.
- The non-financing factors which may also play an inherent role in the rising rate of defaults for these entities. In order to showcase this gap, we propose to test some hypothesis in order to find out such hidden links or correlation in the various default factors in SME financing.
HA: Financing factors are directly related to the rising rate of defaults in the micro and msme segments in India.

HO: Financing factors are not directly related to the rising rate of defaults in the micro and msme segments in India. The analysis of the paper using factor analysis will help us to determine whether to accept or reject.

IV. RESEARCH METHODOLOGY

We will essentially try to review the similar research papers which have focused on credit risk modelling for the large corporate sectors having access to financial reports. Research is based on literature review in the field, summarizing the findings related to the macro level risk, micro level risk inherent in small business. The CDR cases filed in the court will act as a benchmark to assess 9 the reasons of default of such entities and this in turn help to assess the credit worthiness of the borrowers.

The primary source of data has been found put by floating a questionnaire to people who are working in the credit risk department of the various private sector banks, NBFC’s as well as the new age fintech companies furnishing out loans for these micro and SME entities. The answers received from them have been formulated in the Likert scale based on their choices and this data have been used for factor analysis. The factors which are similar are loaded in groups based on the results. The questions asked to the respondents have been added at the end of the document in annexure 1.

The secondary sources of data would basically come from the published reports and data sources from the various sites like RBI, SIDBI, GOI alongside various blogs and reports from the editorials. Statistical sources of data from the various financial statement analysis, the risk rating matrix from the credit appraisal memorandum can be used for the analytics to determine the key issues and thereby helping in better credit analysis and modelling the credit risk in a much better way as compared to any other known sources. The primary data results along with the qualitative data from the risk rating scale will be tested using various analytics tool to find out the mean data points as well as the most important factors that have the maximum weightage in default to act as a sort of early warning system for the lenders at large. An important point to mention here is for the purpose of this study I have used some of the factors as a means for analysing the defaults in these entities from one of the studies of a banker allotted for study under the IBF, Mumbai. There can be many other factors which may play an inherent part thereby changing the results but for the time being these factors will be used as a questionnaire for the primary data and analysed using the factor analysis of SPSS. The results from the analysis will act as a benchmark in rejecting our null hypothesis or accepting

V. DATA COLLECTION & ANALYSIS

The primary data used for the paper has been collected by floating a google questionnaire containing a set of basic questions: the entire question form has been appended at the end of the paper in annexure 1. The questions were sent to a set of respondents who have experience in banking industry and have been involved in assessing the credit worthiness of the micro, medium or large corporates. The respondents are a mix of people having diversified experience from credit, risk as well as recovery of default loans. The collection of data from private, public as well as non-banking financial corporations will give a sense of variety in understanding how each entity attaches different risk rating to each factor relative to default. The factors on which most of the micro and MSME companies’ default have been extracted from one of the studies undertaken by the IBF, Mumbai. Although there could be more factors, the ones I have used for factor analysis are from the study from the above paper which I have cited in the paper. The research would have been different if I had taken other factors into consideration but due to constraint of data collection, I have used them as the factors. The secondary data collected from the CDR cases, reports of other authors as well as some of the credit appraisal memos of some micro and msme entities can be used as a means of comparison of the research results from the data analysis. The qualitative data from the risk rating scales of some of the reports will verify our findings from a qualitative aspect and help us in proving our hypothesis whether or not financial factors play an inherent part in the rising rate of defaults in the micro and msme segments. The factors which play the most important role as stated in the study has been stated in the following table:

For the purpose of ease and use the factors have been named in the following notation and used in the factor analysis. Our entire data analysis will contain data in the following form: 11

Factors Notation (SPSS factor analysis), Diverting of Funds-R1, Industrial Stickness-R2, Low Technology Innovation-R3, Failure by promoters to bring in capital-R4 Inadequate Product Branding and Marketing Tie Ups-R5 Under Finance by banks R6 Delay in accounts receivables from corporates-R7 Others-R8. A total of 53 respondents did participate in the questionnaire but some of the data was missing in some factors hence for the sake of simplicity a total of 50 data points were formulated and then analysed. The screenshots of the results and analysis have been included in the next few pages below: 12

1. Descriptive Statistics:

<table>
<thead>
<tr>
<th>Factor Analysis</th>
<th>Factor Analysis - Descriptive Statistics - January 17, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>R1</td>
<td>3.34</td>
</tr>
<tr>
<td>R2</td>
<td>2.39</td>
</tr>
<tr>
<td>R3</td>
<td>2.62</td>
</tr>
<tr>
<td>R4</td>
<td>3.55</td>
</tr>
<tr>
<td>R5</td>
<td>2.39</td>
</tr>
<tr>
<td>R6</td>
<td>2.74</td>
</tr>
<tr>
<td>R7</td>
<td>2.62</td>
</tr>
<tr>
<td>R8</td>
<td>3.34</td>
</tr>
</tbody>
</table>

The descriptive statistics essentially shows the number of respondents whose data have been factored in the entire calculation alongside the mean and standard deviation of each factors i.e. the issues pertaining to the default in this segment and how does each of them rank based on the results obtained through the google form. We can see from the mean data value that factors (R1,R4,R6,R8) are more highly ranked based on their mean scores which means that
the respondents feel that these factors should have the highest risk factor while financing these entities or rather might be the major reasons for default.

In this context, diverting of funds by promoters, failure by the promoters to bring in capital, under finance by banks and other factors (macroeconomic, statutory, environmental factors) might be the ranked higher as compared to the other factors. This is just a very simple analysis based on the data points and there isn’t much data or proof to conclude our findings whether financing or non-financing factors have the edge or not. Under finance by banks i.e. R6 has the highest weightage here in this analysis.

2. Correlation matrix:

It shows the correlation between the various elements or factors with respect to one another and the diagonal values should be 1 else that factor if its less than 0.5 should be removed from analysis and again checked.

### Factor Analysis

**Factor Analysis - Correlation Matrix - January 17, 2019**

<table>
<thead>
<tr>
<th></th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
<th>R7</th>
<th>R8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>1.000</td>
<td>-0.002</td>
<td>-0.006</td>
<td>0.429</td>
<td>0.115</td>
<td>-0.172</td>
<td>-0.156</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>-0.002</td>
<td>1.000</td>
<td>-0.236</td>
<td>-0.008</td>
<td>0.409</td>
<td>-0.019</td>
<td>-0.059</td>
<td>-0.288</td>
</tr>
<tr>
<td>R3</td>
<td>-0.006</td>
<td>-0.236</td>
<td>1.000</td>
<td>-0.010</td>
<td>0.090</td>
<td>-0.068</td>
<td>0.083</td>
<td>0.172</td>
</tr>
<tr>
<td>R4</td>
<td>0.429</td>
<td>-0.008</td>
<td>-0.010</td>
<td>1.000</td>
<td>-0.051</td>
<td>-0.150</td>
<td>-0.323</td>
<td>0.106</td>
</tr>
<tr>
<td>R5</td>
<td>0.115</td>
<td>0.409</td>
<td>0.090</td>
<td>-0.051</td>
<td>1.000</td>
<td>-0.003</td>
<td>0.264</td>
<td>-0.430</td>
</tr>
<tr>
<td>R6</td>
<td>-0.172</td>
<td>-0.019</td>
<td>-0.150</td>
<td>-0.051</td>
<td>-0.003</td>
<td>1.000</td>
<td>-0.366</td>
<td>-0.214</td>
</tr>
<tr>
<td>R7</td>
<td>-0.156</td>
<td>-0.165</td>
<td>-0.323</td>
<td>-0.424</td>
<td>-0.340</td>
<td>-0.344</td>
<td>1.000</td>
<td>-0.277</td>
</tr>
<tr>
<td>R8</td>
<td>-0.087</td>
<td>-0.087</td>
<td>-0.264</td>
<td>-0.430</td>
<td>-0.214</td>
<td>-0.277</td>
<td>-0.277</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**KMO and Bartlett’s Test**

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>Bartlett’s Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>.501</td>
<td>Approx. Chi-Square df</td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
</tr>
</tbody>
</table>

| .55.872 | 28 | .001 |

This KMO and Bartlett’s test ensure that the data received from the various responses are adequate or not. In other words, it is called as a measure of sampling adequacy. In our case we can see that the sample size is around 50 respondents and KMO result is 0.581 which in normal terms should be above 0.50, here it is around 0.59 so its sufficient for analysis. Also, the significant i.e. the Sig value should be less than 0.05, here it is 0.001 which means the sample is quite significant and quite correlated enough with the other factors in the list of the above drawn factors to make a reasonable form of analysis and deduction. The lower value also indicates it is potent enough to even the reject the null hypothesis although we need other data to substantiate our thoughts. In raw terms this data holds true so as to say.

3. KMO and Bartlett’s Test:

Here all the factors have 1 in their diagonal elements meaning there is no need for any factor to be deleted and again checked. Also, an important point is that the determinant should be more than 0.001, here it is 0.293 hence factor analysis solution can be obtained. Some of the factors have high correlation like r1 and r4 and are likely to be grouped together in components alongside R6 and R7.

4. Communalities:

**Factor Analysis - Communalities - January 17, 2019**

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>1.000</td>
<td>.755</td>
</tr>
<tr>
<td>R2</td>
<td>1.000</td>
<td>.677</td>
</tr>
<tr>
<td>R3</td>
<td>1.000</td>
<td>.419</td>
</tr>
<tr>
<td>R4</td>
<td>1.000</td>
<td>.580</td>
</tr>
<tr>
<td>R5</td>
<td>1.000</td>
<td>.724</td>
</tr>
<tr>
<td>R6</td>
<td>1.000</td>
<td>.409</td>
</tr>
<tr>
<td>R7</td>
<td>1.000</td>
<td>.685</td>
</tr>
<tr>
<td>R8</td>
<td>1.000</td>
<td>.554</td>
</tr>
</tbody>
</table>

This table shows the communalities which essentially means the variance of each of the factors with each other or even itself. Factors having extracted value greater than 0.5 means that the data is distributed evenly and shows variability. The greater the variation the better the results drawn from the factor analysis useful for the purpose of study. Here R3, R6 factor have less than 0.5 but still close enough as all the rest of factors have variations over 0.5 meaning they good enough for analysis.

5. Total variance explained:
Eigen value shows the number of extracted factors whose sum should be the number of items which are subjected to factor analysis. It also shows the variance accounted for each component into which all the 8 factors from R1 to R8 have been divided into groups. This shows that component 1 explains as most as 22.2 components in the data. Here in this above data component 1 accounts for 27.43% of the entire variance in the data set and total 3 components have cumulative % variation of around 60.173% meaning the entire factor of 8 items have been clubbed mostly into 3 groups or components. Also, the initial Eigen values have to be greater than 1 to showcase variability and here from 3 Components we can see have Eigen values of greater than 1.

The scree plot is essentially used to demonstrate the relationship of the Eigen values with each of its factors /components whatsoever be the case according to the study you have undertaken. In this case it represents the factors clubbed by its components or groups. It shows how many column or groups to retain that have Eigen values greater than 1. In this case it shows there are 3 components or groups are possible having Eigen values greater than 1 and after that the graph flattens out a bit. Hence all the factors i.e. the issues in SME financing can be clubbed against maximum of 3 components. Thus, this supports a 3 component or 3 group solution which will be evident shortly from the component matrix as well as the rotated component matrix.

7. Component matrix:

8. Rotated component matrix:

The factors are rotated so that they are easier to interpret. One of the main reasons of rotation is to reduce the number of factors on which the variables under the investigation have high loadings. The rotated component matrix is a key element is our hypothesis.
study. If we can somehow group the factors based on components and try to relate their characteristics and attributes along a common school of thought then it becomes easy to analyze the entire results based on similar groupings. The number of iterations also increases on rotating the matrix and hence the study becomes a bit on the easier in at least interpretations the results. The following table will illustrate the grouping achieved using factor: 20
Component 1 Component 2 Component 3
R6 R3 R1, R2
R7 R8 R4, R5
Thus, if we can see that in the first component 1: under finance by banks and delay in receiving payments from corporates are clubbed together meaning that they are essentially financing issues that are plaguing these entities at present. The second component 2: low technology innovation and other factors means there is some technical upgradation that needs to be done due to huge competition as productivity in these sectors may be hurt due to in efficient process management or machinery. Others may mean legal, statutory and environmental issues that are not a part of the financing aspect in general. The third component 3: diverting of funds, industrial sickness, failure by promoters to bring in capital, inadequate branding and tie ups can be clubbed together under qualitative factors and internal micro factors. (The diversion of funds may also fall under wilful defaults and hence may not be a major part in our study as RBI has different legal proceedings for such cases and our scope entails circumstantial defaulters or consequential ones only)
We will still try to include as much as recommendations in our conclusions for diversion of funds and other qualitative factors if they happen to match with similar studies and we find that they are the top -rated reasons for default.
To match our hypothesis, we will try to assign the entire factors into 2 separate components and try to rate them according to the mean of component coefficient score index to prove our hypothesis if possible. So, there would be 2 components boiled down from the above as financing factors and no financing factors.

Financing Factors Non-Financing Factors
R6, R7 R1, R2, R3, R4, R5, R8
21
Although R1, R4 may be initially thought as financing factors but they are essentially micro risk factors inside the company and the promoter can divert funds for unrelated diversification and may also fail to bring in the required capital to maintain the debt equity ratio. These may look like financing issues but essentially depend upon the nature of the promoter, the board of directors, the management team and the entire team involved to actually find out the reason. The root causes may well be in the entire system but if we can’t track the flow of funds then it becomes a qualitative aspect.
9. Component score coefficient matrix:

Now this coefficient matrix forms an important part in our entire analysis of clubbing the factors and proving our hypothesis. If we can find out the median score of each component from this table and then compare with the median of the other factors according to the table, we have stated wherein we have clubbed factors into 2 halves i.e. financing and non-financing factors then we may be able to prove our hypothesis or reject the null hypothesis. 22

Table: Factor Analysis - Component Score Coefficient Matrix - January 17, 2019

<table>
<thead>
<tr>
<th>Component Score Coefficient Matrix</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>R1</td>
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<td>R4</td>
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<tr>
<td>R6</td>
</tr>
<tr>
<td>R7</td>
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<tr>
<td>R8</td>
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</tbody>
</table>

Median: 0.41
0.336
Here it is quite evident that the median of the financing factors has the clear weightage compared to all the other factors clubbed together (0.41>0.336) stating that the null hypothesis can be rejected from the above evidence. Thus, we can clearly say from the above drawn score that financing factors play a much bigger role in the rising rate of defaults in the micro and msme sectors in India.

VI. RESEARCH FINDINGS

Before we delve into the findings of our study let us try to understand the various levels of micro and macro level risks that are a part of the rising rate of defaults. The quantitative findings we have can easily be compared to the qualitative data we have taken from the risk rating of 3 similar stressed sector in the msme segments. Here in the below table we have given a brief note on the risk as well as the risk mitigation strategies in general for the small entities. The macro level risks are illustrated in the following table below:

Micro level (internal issues of these firms) risks are demonstrated below:

Issues Mitigation strategy
1.Statutory clearance Risk: In case of statutory clearances like environmental clearances we need to do in depth analysis and stop the process if the complications are huge.
2.Business Risk: We would find work orders for the stressed firms based on our existing clients we have in our portfolio in case the current client is not able to provide work orders to this stressed firm to the tune that was expected from them.
3.Financial Risk: We would create some sort of an escrow arrangement in order to control the cash flows generating from the work orders and reduce our default risk.
4.Asset Risk: We will initially only finance standard assets to these firms, those that have a high marketability and also
create some agreement with the OEM’s in order to reduce our exposure by means of a buy back model or a loss pool. 24 Issues Mitigation Strategies
1. Unplanned diversification without proper planning for cash accrual. Escrow arrangement would take care of the undue expenses arising out of the unplanned expansions as there will be proper monitoring of the cash outflow. 2. Blocked receivables (High debtor days) Bills discounting can be used to reduce the reliance on blocked receivables. 3. Higher working capital requirements, working capital funds are used to pay term loan interests. Some sort of need-based funding by means of term loans or working capital loans may be provided to keep the operations in flow. We can see from these qualitative data that few factors that in macro the financial risk and in micro the blocked receivables, unplanned diversification i.e. the diversion of funds are more or less related to each other. So, if we can analyze data from the credit risk scoring grid or matrix of some lenders an figure out what value in terms of risk they do attach while creating a risk rating for credit appraisal memorandum we may be able to decipher some key insights and then create strategy for the turn arounds. For the purpose of this study we have taken risk rating scale of 3 companies which have defaulted:
- Transportation company
- Construction company
- Mining company

The actual names of the company have been replaced with pseudo names for the purpose of nondisclosure agreement with the lenders from where we have got the data.

25 The risk grading entails:
1- Extremely low risk.
2- Very low risk.
3- Low risk.
4- Moderately low risk
5- Moderately high risk.
6- High risk.
7- Very high risk.
8- Extremely high risk.

Transportation segment:
ABC TRANSPORT
RISK GRADING
1 MANAGEMENT RISK 6
2 BUSINESS SECTOR RISK 4
3 POSITION WITHIN SECTOR RISK 6
4 FINANCIAL REPAYMENT RISK 6
5 FINANCING SOURCES 6

Construction segment:
MNO CONSTRUCTION
RISK GRADING
1 MANAGEMENT RISK 7
2 BUSINESS SECTOR RISK 4
3 POSITION WITHIN SECTOR RISK 5
4 FINANCIAL REPAYMENT RISK 6
5 FINANCING SOURCES 7

Mining segment:
PQR MINING RISK GRADING
1 MANAGEMENT RISK 6
2 BUSINESS SECTOR RISK 5

3 POSITION WITHIN SECTOR RISK 4
4 FINANCIAL REPAYMENT RISK 7
5 FINANCING SOURCES 7

By comparing the data from the risk rating scale, we can see clearly from these 3 above cases that highest weightage of risk comes from these 2 risks
- Financial repayment risk. ((6+6+7)/3=6.33)
- Financing sources. ((6+7+7)/3=6.66)

Both of these factors lie within the 6 to 7 brackets in the risk matrix i.e. in the high-risk zone to the very high-risk zone confirming our results obtained via the coefficient matrix score using the factor. These data re instates our results from the quantitative data found through SPSS that financing issues are the major reasons for default in these micro and msme sectors and a concrete plan needs to be drawn out for the steady turnaround or recover for these entities. These findings both from the qualitative risk grading scale as well as the factor analysis quantitative results will help the lenders like the public sector, private sector as well as the NBFC in trying to attach more risks to such factors when they furnish out loans to such segments. While these financing factors alone may not create the only reasons for default and perhaps all the other qualitative factors (diversion of funds, marketing inefficiency, high competition, lack of innovation) may in turn create a ripple effect or cascading effect which may bring about the lack of funds to bear the loans i.e. both the principal as well as the interest component.

VII. CONCLUSION

The findings from the above results as well as the qualitative results obtained from the risk matrix will be able to confirm our hypothesis that financial factors are the most potent. They can be considered as one of the major reasons for default in this sector. As we can see that the financing issues cause the most amount of discomfort for these entities, Let us delve into the strategies that can be used by the lenders for a successful turnaround. The major ways for successful turnaround of a stressed asset includes:
- Revenue management
- Cost optimization

The revenue management is achieved through the escrow arrangement where in the lender will essentially take control of the cash flow of the firm. This sort of arrangement will also help in keeping a tag of the expenses of the firm and as a result recovery of the entire dues would be possible where in no other frameworks like the ARC, Private Equity or IBC the entire dues could be recovered without considerable haircuts. The cost optimization is also an important aspect of the entire revival process where the expenses of the firm should be kept in check and closely monitored for any kind of pilferage of funds by the management. Site inspection, concurrent auditing and placing a site inspector to monitor the day to day activities can be a major way for cost optimizing. All these steps can be thought of something that can be tried by the lenders because in every case of restructuring or recovery through other frameworks will result into large haircuts and the realizable value of the assets recovered can be very less. The micro and the msme entities have very less asset in
the form of collateral and such deep haircuts would result in loss for the lending institutions in general. The entire concept of revival or mitigating the financial risk or issues for default revolves around the policy where in the lender acts as a strategic investor. One of the major aspects for the entire model to be sustainable is that the risk mitigation strategies should be properly monitored and the list should be updated as and when new challenges pop up. 28

The macroeconomic risks should also be closely tracked and properly monitored so that if such risks like with respect to some statutory clause’s like environmental clearances, geographical issues exist it’s better not to go in for revival for those firms no matter how feasible it might look. The selection of right customers from the pool of stressed assets on the basis of various parameters right from repayment track record of the earlier dues, percentage of earlier dues already recovered, the terms of the agreement right from IRR charged to collateral amount should be properly followed by both the parties for a successful turnaround of the firm. The product being offered right from new assets to refurbished assets should depend on case to case basis and proper checks should be kept in place to monitor them. The performance monitoring will be an essential part of the entire turnaround process and both the parties should oblige by them to make it a success. We also need to find out the root cause of the issues let’s say some manpower issues, raw material procurement issues exist, marketing of the products, innovation in process management, efficiency of the work. The entire set of non-financing factors may bring forth the wrath of the company not as a single entity but in unison as a cascading effect. We need to monitor all such factors in order to find out the exact cause of default and in most cases small firms at large generally default due to circumstances being harsh, issues in statutory clearances, environmental, legal, inter-governmental factors. Recently we saw that in India demonetization, GST brought about issues in these sectors and these things we can’t predict whatsoever using analytics or forecasting tools. No matter what hypothesis we write and prove, the actual reasons maybe something which can create a cascading effect involving all the factors at large bringing about the fall of the company. Thus, if all the checks are in place, turnaround of these stressed firms should be possible provided that some large-scale macroeconomic disasters don’t take place.

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AUTHORS PROFILE

Dr. Neha Patvardhan, is currently serving as an Assistant Professor in the department of Finance at Symbiosis Institute of International Business, SIDU Pune. She has been awarded a Ph.D. degree from the board of management and is also NET qualified. She has received master’s degree in management studies (MMS Finance) and has graduated with a Bachelor degree in the field of Pharmacy. To her academic accomplishments include diverse teaching experience of 8+ years in both national and international universities. Her research interests span both corporate financing and Psychological and behavioral aspects related to visually challenged and catering their accessibility requirements. Few Publications- “The analytical study of steel seethe analytical study of steel sector using Altman Z score method”(JETIR June 2018) “The Best Way to Improve the Performance of Credit Risk Analytics Model is not to Look for Fancy Tools or Techniques but to Improve Data Quality First”(IJETMAS, July 2017) “Educational outreach: critically important for the beneficiaries to understand the pros and cons of PPP projects”(special reference to NMC), (IJAR, April 2017)” “Green Banking: Management Innovation in India For Sustainable Development”(November 2016) “Public Private Partnership (Ppp) Projects: Reducing Financial Burden And Achieving Sustainable Development (With Special Reference To Nmc)” (IJME, June 2016) “Public Private Partnership (Ppp) Projects: Reducing Financial Burden And Achieving Rapid Infrastructure Development (With Special Reference To Nmc)” (IJMAR, June 2015)

Prof. Smita Santoki presently working as an Assistant Professor with the Symbiosis Institute of International Business (under the Symbiosis International Deemed University). She is a Masters in Commerce and with MBA in International Business and is currently perusing her PhD. With a diverse experience in both the industry and academics for the past 14 years, she is a Faculty, Corporate Trainer & a Consultant in the field of Export-Import Management, Foreign Trade Policies, International Diversity Management, & Shipping. Her research interest apart from the above; includes Social Entrepreneurship too. She has published her paper on the portals of Trade Finance Global, titled as ‘India’s EXIM Trade Policies for Metals and Metal Scrap.’ Her next paper spoke about ‘Nurturing India’s North eastern Entrepreneurs for Sustainable Business’ that got published in the Intercontinental Journal of Marketing Research Review. Another paper is on ‘Focus Franchising-In Rural Markets for Global Growth’ for an International Conference on Franchising. Currently, 3 papers of hers related to Technology Integration with the Visually Challenged are in progress for Scopus indexed Publication.