A Study on Credit Risk Management and Appraisal Process at Punjab National Bank, Nagpur

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Abstract:
During the study the researcher learnt how the theoretical financial analysis aspects are used in practice during the loan assessment. The credit appraisal is a process of appraising the credit worthiness of loan applicants. Thus it extremely important for the lender bank to assess the risk associated with credit; thereby ensure the security for the funds deposited by the depositors. There are clear guidelines on how the credit analyst or lending officer has to analyse a loan proposal. For credit risk assessment only financial estimation is not sufficient. Borrower’s credit worthiness, industry type, product length, etc. is also considered. Estimating financial growth of the firm is key factor in credit assessment. It depends on market condition, industry growth and managerial control. From all the above mentioned factors credit decision is made. Among all these factors, financial analysis is most important for which ratio analysis is done.

Introduction: A credit is a legal contract where one party receives resource or wealth from another party and promises to repay him on a future date along with interest. In simple terms, a credit is an agreement of postponed payments of goods bought or loan. With the issuance of a credit, a debt is formed. A credit risk is the risk of default on a debt that may arise from a borrower failing to make required payments. In the first resort, the risk is that of the lender and includes lost principal and interest, disruption to cash flows and increased collection costs. Credit Risk Management is the practice of mitigating those losses by understanding the adequacy of both a bank’s capital and loan loss reserves at any given time – a process that has long been a challenge for financial institutions. The main aim of credit risk management is not only quantifying risk but also reducing exposure of credit risk by adopting safety measures through collateral securities, guarantees, credit derivatives and balance sheet netting. RBI guidelines on credit exposure and management call for adoption of prudential norms. This specifies both quantitative and qualitative restrictions on loan sanctions. At organisational level, overall risk management is assigned an independent Risk Management Committee or Executive Committee of the top Executives that reports directly to the Board of Directors.

Objectives

• To study the various parameters used by the bank for sanctioning the loan.
• To evaluate the loan recovery mechanism usually followed by bank.
• To study Credit Risk Management structure of PNB.
• To study the Basel Accord I, II and III and the related guidelines.
Need for the Study: Credit is a core activity of banks & an important source of their earnings, which go to pay interest to depositors, salaries to employees & dividend to shareholders. In credit, it is not enough that we have sizable growth in quantity/volume, it is also necessary to ensure that we have only good quality growth. To ensure asset quality, proper risk assessment and management right at the beginning, that is, at the time of taking an exposure, is extremely important. Moreover, with the implementation of Basel accords, capital has to be allocated for loan assets depending on the risk perception/rating of respective assets. It is, therefore, extremely important for every bank to have a clear assessment of risks of the loan assets. That is why Credit Risk Management is needed.

Scope of the Study: The study will be able to reveal the procedures need to be followed by the bank regarding credit risk management and appraisal process at PNB. This study will help to know about the various risks related to credit that they should avoid. This study will also help the customers to understand the experience and expectations of the bank. It will help to know the various methods of lending and various indicators or parameters considered by the bank for measuring the performance of the company. This study will reveal the pre-sanction and post-sanction follow-up procedures followed by bank. It will help the customers to understand the procedure for availing credit facilities from the bank.

Review of Literature
The author V. A. Avadhani, in the book, ‘Investment Management, 2008’, topic ‘CRISIL Rating and Investor Protection’, is of opinion that investors should be well versed about CRISIL for protecting their interests. The CRISIL ratings are given only for debt instruments of companies, namely, commercial papers, bonds, debentures and fixed deposits. Since 1992, the ratings of ICRA are also used by companies. These are given on a voluntary basis and may be publicised or not, depending on the company’s own perception of impact of these on the investors. The investors should examine these symbols with regards to their implications. Since a rating given can be revised upwards or downwards, the investors should keep a watch on any such revisions. The SEBI guidelines now insist that all companies should get these ratings and publicise them compulsorily, if they are borrowing through issue of debentures.

In the journal, ‘Credit Risk Management: An Empirical Study on BRAC Bank Ltd.’ of Business Management and Strategy, dated June 5, 2014, Proshenjit Ghosh, Md. Ariful Islam, Md. Moeid Hasan, the authors are of opinion that credit risk management holds a positive relationship with credit monitoring, reliability and assurance factors. All these factors play vital role in the mitigation process of credit risk. Risk mitigation process starts from sourcing loan applications and the loan application goes through several screening process where reliability and assurance factors are very much important. Here, knowledge of practical world and product program are very much essential to identify risks associated with loan proposals. In a word, credit risk management is all about ensuring repayment capability of the customers who are provided loans and advances. Minimizing Credit Risk is subject to proper framework of risks and justification with historical trend and other assurance factors.
In the issue of *The Journal of Credit Risk* The issue's first paper, ‘Debt structure, market value of firm and recovery rate’, dated 27 March 2013, by Min Qi and Xinlei Zhao, the authors, have described about the determinants of loss given default at the instrument, firm, industry and economy level. The authors propose a new variable, called seniority index, to incorporate the percentage of debt both more senior than and *pari passu* to the instrument under consideration. They find that it is very important to account for debt *pari passu*, as this new seniority index is the most important determinant of recovery rates or equivalently loss given default. Firm conditions, as measured by the trailing stock return of the firm, are the second most important determinant of recovery rates. For private firms, where market information is not available, industry and macro conditions can be informative. The authors do not find industry conditions to have a dominant role and their relative contribution varies with the sample, model specification and the modelling technique used.

In the article of Economics Times, dated January 11, 2013, Abhishek Vasudev, New Delhi has given opinion about ‘Basel Banking Norms’. Around 10 public sector banks (PSBs) will get a total capital infusion of Rs 12,517 crore from the government before this financial year ends. This is to enable a step-up of lending at this time of slowing economic growth, as well as meeting the capital adequacy norms. In the light of this development here is a short primer on Basel banking norms. Basel is a city in Switzerland which is also the headquarters of Bureau of International Settlement (BIS). Basel guidelines refer to broad supervisory standards formulated by this group of central banks called the Basel Committee on Banking Supervision (BCBS). The set of agreement by the BCBS, which mainly focuses on risks to banks and the financial system are called Basel accord. The purpose of the accord is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses. India has accepted Basel accords for the banking system.

This article of Economic times, dated Jan 19, 2012, T. T. Ram Mohan, is related to ‘Basel 3 implementation: Indian banks to plan for more capital’. With the RBI flagging off the implementation of Basel 3 guidelines, Indian banks will have to plan for more capital in the years ahead. They are well-placed to meet higher capital requirements and indeed can strengthen their competitive position vis-a-vis international banks - provided the government can deliver on its own responsibilities towards public sector banks. The RBI has set a more demanding schedule for Basel 3 implementation than the Bank for International Settlements. The BIS has set the deadline for full implementation as 2019; the RBI would like Indian banks to comply by 2017. The total regulatory requirement of total capital (tier 1 and tier 2) in India is 9%, higher than the BIS norm of 8%. It will remain so under the new guidelines. Under Basel 3, two important changes happen.

**Limitations:** The major limitation of this study was data availability as the data is not readily shared for dissemination. Due to unavailability of data, peer comparison could not be done. Due to ever changing environment many risks are unexpected and the remedial measures available are based on general experience on past. Therefore risk can only be minimized but cannot be erased completely. Assumptions and projections are based on current market
conditions and have not taken into account the price volatility. Due to the on-going process of globalization and increasing competition, no single model or method will suffice over a long period of time and constant upgradation will be required.

Research Methodology

• Methodology is description of the process, rules, methods employed in a study. Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. This chapter deals with universe of the study, locale of the study, method of data collection, tools used for data collection, types of sampling used, sample size used for study and analysis of the study.

• **Universe of the Study:** The universe of the study consists of all the employees of the organization (Punjab National Bank).

• **Locale of the Study:** The locale of the study has been narrowed down to the PNB Circle Office, Nagpur. The study is categorized into the credit department of PNB. The office received a number of proposals for Working Capital Limits and Term Loans on daily basis. So these proposals were taken up for analysis purpose. The findings may or may not be similar to the other branches of the company.

• **Sample Selection:** The sampling of study has been done as per convenience sampling. A convenience sample is a sample where the samples are selected, in part or in whole, at the convenience of the researcher. The researcher makes no attempt, or only a limited attempt, to insure that this sample is an accurate representation of some larger group or population. Owing to time constraint and being a learning experience the research was narrowed down to 2 cases so that an in depth analysis can be carried out.

• **Data Collection:** For the purpose of data collection, two different sources were adopted for the study:
  - Primary Sources: Proposals were considered and the procedures followed were observed. Various documents were taken from the company to complete the analysis. The management was interviewed for clarifications, wherever required. The researcher also consulted the manuals and guidelines provided by PNB.
  - Secondary Sources: The researcher has gathered material from various risk management related research papers and journals. The official website of PNB, RBI and other web portals on financial topics were also studied to understand the process.

Data Analysis and Interpretation

Case 1 – PQR Engineering

**Background:** PQR Industries, engaged in engineering, procurement, manufacturing and supply of specialized engineering products and solutions to power plants. The company is part of SZ Group with interest in power plants, bop, sugar, co-generation, distilleries, road constructions, educations and other sectors. The company is engaged in the manufacturing, fabricating, design and supply of boiler components for power plant upto to 600mw
comprising boiler columns, beans, coils, re-heaters, bends, economizing pipings, ducts and bunkers and pre-engineered building sector used in power plants, petroleum, steel, chemicals and other such projects

**Present proposal:** The borrower xyz industries approved to the bank for the sanction of the following facilities including working capital limits (existing = 10 crores, proposed = 20 crores) and term loan

1. **Management Evaluation:**
   b. Brief profiles of the director:
      
      **Director 1:** By his sheer performance in the company in June 2006, he was promoted as an executive director reporting to the board of directors of the company. He brought in a wave of infrastructural changes with technological advancements bracing the company future.
      **Director 2:** At the age of 27 years has post-graduation in MBA specialization in marketing and finance. He has knowledge in specialized field, has work on many important projects. His strengths are team building, leadership quality, dedication towards work and getting new work style in the company.
      **Independent director 1:** He, 69 years, is an engineer graduate, has hands-on experience of about four decades in power sector with bhel. He retired from bhel as general manager (western region). He has a sound experience in manufacturing, construction, testing, commissioning, repairs and services in the power sector.
      **Independent director 2:** He, 37 years, is a young entrepreneur, received a diploma in mechanical engineering from bombay technical board in 1994, a be in mechanical engineering from nagpur in 1998.
      **Executive director:** She is having more than three years of hands-on experience in handling the company’s overall management and the administration. She has played a significant role in developing a corporate culture in the organisation and a sense of responsibility and loyalty among the employees towards the organisation.

   The management of the company is following corporate governance as per the abs dated 31.3.2012. The second line has also joined as directors giving way for a good succession plan. One of them is qualified civil engineer while the other is an MBA from Pune. The company is incorporated with the main object of manufacturing of pressure parts used by power plants, pharmaceutical sector, sugar industry, heavy engineering industry, etc. And technological structures for the heavy engineering industry would backward integration of engineers ltd. (SHEL). The customer base of the company includes Bharat Heavy Electrical Ltd (BHEL). The customer base include TNEB, tuticorin, Tamil Nadu, CSEB, Korbs, Chattisgarh, National Therma Power Corporation (NTPC), Jaypee Group etc. Borrowers diversification, expansion and modernisation programme include that company has increased its production capacity to 3000mt per month during the FY’12 as against 1000mt per month during the previous year FY’11 by adding new unit which is well equipped with the advancement machinery.
2. Financial Evaluation:

A. Debt Equity Ratio = \( \frac{\text{Long Term Debts}}{\text{Shareholders Funds}} \)

<table>
<thead>
<tr>
<th>Particulars (crores)</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term debts</td>
<td>23.87</td>
<td>39.8</td>
<td>54.73</td>
</tr>
<tr>
<td>Equity</td>
<td>12.7</td>
<td>22.39</td>
<td>34.04</td>
</tr>
<tr>
<td>Debt-equity ratio</td>
<td>1.88</td>
<td>1.78</td>
<td>1.61</td>
</tr>
</tbody>
</table>

Interpretation: The ratio has decreased which indicates there is less dependency on borrowed funds. There is low risk and high margin of safety to creditors. The firm can take the advantage of its goodwill & proper quality of management to borrow more funds.

B. Debt-Service Coverage Ratio = \( \frac{\text{Profit before Interest and Tax}}{\text{Interest on Long Term Debts}} \)

<table>
<thead>
<tr>
<th>Name</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBIT</td>
<td>16.61</td>
<td>20.96</td>
<td>25.61</td>
</tr>
<tr>
<td>Interest</td>
<td>5.29</td>
<td>6.79</td>
<td>5.83</td>
</tr>
<tr>
<td>Debt-Service Coverage Ratio</td>
<td>3.13</td>
<td>3.08</td>
<td>4.39</td>
</tr>
</tbody>
</table>

Interpretation: There is need for lower moratorium period/repayment of loan in a shorter schedule. The company has generated enough operating profits to pay its debt services and does not need to use its savings.

C. Interest Coverage Ratio = \( \frac{\text{Profit Before Tax}}{\text{Interest}} \)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit Before Tax</td>
<td>16.65</td>
<td>22.13</td>
<td>28.71</td>
</tr>
<tr>
<td>Interest</td>
<td>5.29</td>
<td>6.79</td>
<td>5.83</td>
</tr>
<tr>
<td>Interest Coverage Ratio</td>
<td>3.14</td>
<td>3.25</td>
<td>4.92</td>
</tr>
</tbody>
</table>

Interpretation: The firm can well afford to pay the interest on current debts along with its principal payments. Company risk is low. It’s a good sign. Company’s operations are producing enough cash to pay its bills. Company is extremely liquid and shouldn’t have problem in getting a loan.

D. Current Ratio = \( \frac{\text{Current Assets}}{\text{Current Liabilities}} \)
Interpretation: Company has ability of the business enterprise to pay-off the current liabilities. It has capacity to withstand sudden reverses by the strength of its liquid position. The short term liquidity can be increased by investing more in current assets. Management practice and credit policy can be improved.

E. Net Profit Ratio: \[\text{Net Profit Ratio} = \frac{\text{NPAT}}{\text{Net Sales}}\] (Rs. in Crores)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPAT</td>
<td>3.64</td>
<td>5.43</td>
<td>11.65</td>
</tr>
<tr>
<td>Net Sales</td>
<td>80.87</td>
<td>118.53</td>
<td>180</td>
</tr>
<tr>
<td>Net Profit Ratio</td>
<td>4.50%</td>
<td>4.58%</td>
<td>6.47%</td>
</tr>
</tbody>
</table>

Interpretation: Firms overall efficiency in operating the business and is suitable and thus its financial position is also good. Firm should increase net profit either by increasing sales or reducing operating expenses. The investors can use this ratio to analyse position of the firm.

3. Business Evaluation: The demand for heavy engineering equipments is derived from user industries such as power, construction, cement, steel, chemicals and pharmaceuticals and refining. In addition, significant investments to power generation and transmission and distribution (t&d) have driven growth of the engineering goods sector. With investment demand picking up, the engineering sector is expected to register higher growth. Capital goods in the index of industrial production have registered a growth of 16.7% in the period april to december 2010 over the corresponding period in the previous year. It now extends to segments like direct engines, industrial machinery, protection systems, ship building and repair, agriculture implements, power cables, electric motors, power-driven pumps and material handling equipments.

4. Technical Evaluation: The 2 manufacturing locations are located in 5star industrial area of midc. The area is near to major upcoming steel and power plant and major industries in the western, central and eastern regions. The factory is already running and the adequate water is available from the midc and to take care of future requirements borewell at factory site is also available. The unit-1 has sanctioned load of 250kw and unit-2 has sanctioned load of 370kw from mseb to take care of existing and future requirements. The
basic raw material required in ms steel which is easily available in and all over India. Adequate no. Of semi skilled and unskilled labour force is available in the vicinity of the factory site. Thermal power products: technological structures, ibr certified piping systems, high pressure and high temperature pressure parts (such as fin & fusion weilds of panels, super heaters, re-heaters, heaters for re-heaters, economizers). Products for tanks and vessels comprising (blow down tanks, de-aerators, feed storage tanks and lp heaters) valve skids. Sugar porject includes bank tubes, trays and jackets, jacketed piping. Petroleum and petrochemical industries include distillation columns, volumetric condensers, misc. Vessels for air, oil and water sectors.

5. **Conduct of Account Evaluation:** No irregualrity is observed with our bank in last 2 years. Operations is account are healthy. Timely submission of data

<table>
<thead>
<tr>
<th>Factor</th>
<th>5% score obtained</th>
<th>Weight</th>
<th>Weight score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial evaluation</td>
<td>75.00</td>
<td>40.00%</td>
<td></td>
</tr>
<tr>
<td>Business and industry evaluation</td>
<td>60.00</td>
<td>25.00%</td>
<td></td>
</tr>
<tr>
<td>Management evaluation</td>
<td>75.00</td>
<td>20.00%</td>
<td></td>
</tr>
<tr>
<td>Conduct of account</td>
<td>75.00</td>
<td>15.00%</td>
<td></td>
</tr>
<tr>
<td>Aggregate score</td>
<td></td>
<td></td>
<td>65.66</td>
</tr>
</tbody>
</table>

The aggregate score 65.66 corresponds to risk rating PNB-A

Justification: The credit risk rating of the company as on date 31.3.2013 is PNB-A.

Recommendations: In view of above we recommend as under, approval for sanction of fund facilities in favour of company.

**Findings:**

Projects are technically capable of giving proposed output as they have technically skilled labours as well as technicians and machineries. Borrowers are well experienced. Evaluation related to business is done by studying market demand and potential of products of the firm. Financial analysis is done by calculation various types of ratios including DSCR, Interest Coverage Ratio, Debt-Equity Ratio, Current Ratio and Net Profit. With the help of various evaluations, a company can know when it would have a problem and in what aspect. A proper credit risk assessment would lead to lesser chances of default. For loan recovery credit appraisal is done by the bank prior before providing any loans & advances/project finance & also checks the commercial, financial & technical viability of the project proposed its funding pattern & further checks the primary & collateral security cover available for recovery of such funds. The present risk rating model does not have any mechanism to prioritize certain sectors of the economy. There are certain sector in the economy where risk spread is low and certain sectors where spread of risk is high like real estate. Also, there are certain infrastructural projects which need to be prioritized. The risk rating model is not flexible to incorporate all these issues.
Conclusion
Some input information has to be provided to banks in the form of project report. This project report includes description of loan, i.e. credit history, purpose of loan, management evaluation, financial evaluation, technical evaluation, business evaluation and code of conduct. For credit risk assessment only financial estimation is not sufficient. Borrower’s credit worthiness, industry type, product length, etc. is also considered. Estimating financial growth of the firm is key factor in credit assessment. It depends on market condition, industry growth and managerial control. From all the above mentioned factors credit decision is made. Among all these factors, financial analysis is most important for which ratio analysis is done. To ensure asset quality, proper risk assessment right at the beginning, is extremely important. That is why credit risk management system and credit appraisal is considered essential.

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