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Correlation between Current Performances & Earnings Management activities

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ABSTRACT - Earnings management has been a major concern to all investors round the world. It throws an open question to all the organizations related to their honesty & credit worthiness. Different researchers have conducted various analysis to find out the reasons behind the executives of the firms getting indulged into the manipulation process. Also studies have been conducted to identify the different techniques of managing earnings as well as the financial reports. In most of the cases it has been found that, the sample comprises of the non-financial institutions as well as the firms engaged in the manufacturing process. However Banks have been excluded from this list in most cases. In the last few years it has been observed that, not only the financial & non financial institutions, but also banks have shown degrowth in their performances. The objective of this paper is to find whether even the banks engage into the manipulation process or not. For this purpose a recent scandal of Punjab National Bank(PNB) which came out in the news in 2018 has been considered. However the methodology used in the current study is based on a model designed by Messod D. Beneish known as M Score model. The motive of the study is also to identify- why banks are not considered as samples when it comes to the measurement of the degree of manipulation involved to alter the earnings.

KEYWORDS: ***Banks, Total accruals, Net Income, Cash Flows from Operations, Derived Variables, Control factors.***

I. INTRODUCTION

The recent scam of Punjab National Bank(PNB) in 2018 has opened the eyes of the world regarding the financial health & the real credibility of the banks. The bank has recorded a loss of Rs 13,420 crores in the last quarter of financial year 2017-18. Reports say that, the bank is planning to recover from it's loss position by recovering its loan losses & also through the sale of its assets. However, it is expected that, a major part of its sale would be the Housing Unit, which is a planned sale of PNB's Stake.

The history of the banking sectors shows that, banks play a positive role in maintaining good relationships with their customers, who may be general customers or even the corporate entities. However it has been observed that, banks often get into several traps of loan loss which are created when parties are not able to fulfill the loans borrowed by them from the banks. Due to such problems, banks face financial credit crunch. In those situations, banks are provided with incentives in order to restrict the credit limits of the firms who are less capable of fulfilling their loan amounts [7]. Studies show that, in comparison to unlisted firms, listed firms engage in earnings management process more with the help of loan loss provisions. However it cannot be concluded that banks disclosing about their loan loss information are less engaged in the manipulation of earnings [26]. It has been observed that, when banks go through crisis period and they want to improve the outcomes of their financial activities, they engage in activities with decreasing value. On the other hand, it can be said that, it is risky to rely on the fair values disclosed by the banks in the absence of the reference prices which are provided by the liquid markets [19]. In the European banking sector, it has been observed that, huge incentives are paid to the executives to manipulate the reported earnings of the banks. However it affects the future performance of the banks in a negative way. These banks inflate their reported earnings by manipulations of the loan loss provisions [5]. Due to the constant increase in earnings management, several regulations have been formed -few of which are of international standards. However, despite of these regulations managers engage in the manipulation process to inflate their reported earnings. Also, managers adopt alternative strategies to manipulate the earnings. One such alternative adopted by the Tunisian banks is the management of real activities instead of the manipulation of accounting earnings [15]. Another study focuses on the management of earnings by the US commercial banks. Here the authors have opined that, despite of the Financial Accounting Standards which are adopted by several banks, they engage in manipulation activities. It is also evident here that, banks who are into deep financial distress generally use level 3 inputs to value their assets & liabilities. It is important to mention here that, such level of

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input valuations are utilized to manipulate the reported earnings of the firms at the discretion of the higher authorities [13]. In the study [9], the authors discuss about the different techniques applied by the private & the public banks in order to manage earnings. Results show that, in comparison to private banks, public banks use more of LLP to manage earnings. Also it is found that, public banks have more of small increases in earnings rather than decreases. In the study [24], different perspectives related to earnings management have been focused & discussed. The paper gives a wider view to the field by analysing the scopes and the incentives achieved by the banks in engaging in earnings management. It also highlights the diversity of the field in different countries around the world. Results highlight that, when on the one hand economical factors like positive GDP helps in reducing earnings management; on the other hand, strict laws might instigate more of earnings manipulations. According to [11], the degree of earnings management is influenced by the composition of the BOD as well as the role played by the auditors and the Board members. It is observed that there exists a positive correlation between the duality role played by the CEO of banks and discretionary provisions. Another study [17] analyses the relationship between CSR and earnings management. The findings highlight that, the managers involved in earnings management tend to involve in different CSR activities through instigation of different methods of financial reporting. A different perspective has been highlighted in the study [1]. It is found here that, banks use Loan Loss Provisions(LLP) to manipulate earnings. On the other hand, the security gains are also used by banks to manage the earnings. According to the study [2], the implementation of IFRS has played an influencing role in identifying the information related to the book value and earnings of the banks. However, it is visible that, the higher the transparency, the higher are the information content. A similar study has been conducted by [20]. The authors find that the implementation of IFRS has a significant impact on earnings management. There has been a prominent negative change in the level of earnings management post IFRS implementation. In the study [18] a systematic literature review has been conducted in order to highlight the impact of the accounting standards on the earnings management activities. In the study [16], the authors have analysed the relationship between Fair Value Measurement (FVM) of Bank assets and Own Credit Risk (OCR). There lies an inverse relationship between the two factors. To add to this, the results highlight that, the Bid-Ask Spread is less in the situations where the Banks are more transparent in disclosing information. A recent study [22] finds that, the LLP has not been applied by the European banks in order to smoothen the incomes. On the other hand the results derived from the study shows that the implementation of IAS has proven successful in terms of avoiding income smoothing. However, according to the author, some other techniques have been utilised to smoothen the earnings of the European banks. The paper [4] derives the conclusion that, the degree of earnings management & Bank loans are correlated. However, when on the one hand the results highlight the positive correlation between earnings management and loan types of the banks; on the other hand, it derives that there is no relationship between earnings management & purpose of the loans in case of refinancing.

II. RESEARCH METHODOLOGY

For the purpose of analysis, the Punjab National Bank (PNB) of India has been considered as a case study.The last year financial reporting of PNB that has been disclosed by the bank & the real financial condition of the bank are completely different. To analyze that, whether the bank has engaged in earnings management or not, 3 financial year has been considered for the purpose of research. Are the information provided by the banks reliable enough to take any investment decisions? [25]. In the situation of firms, discretionary accruals play major role in the manipulation of the earnings. In different studies, researchers have used the Jones Model & the Modified Jones model to measure the total accruals & the discretionary accruals of the firms. However, the value of the discretionary accruals comprises of changes in the total revenue, assets as well as plant, property & equipment [14]. Quite often it is considered that, audit process of the firms play important roles in minimising the manipulation of the reported earnings. However the question arises whether really the quality of audit determines the level of earnings managed in the firms [21]. The management of capital in banks play a major role in the provision of loan losses. However unlike the firms, the motive of personal gains of the managers do not play a significant role behind it [3]. Banks engage in earnings management through the earnings generated through the securities based earnings [6]. Banks make use of discretionary accruals by adjusting the fair values of the securities in order to cover up the LLP [12]. Different models like- Healy's model, Jones model, Modified Jones model, Industry model and many others has been used to identify the total accruals of the firms. On the other hand the Total accruals have been segregated in order to identify the measurement of both discretionary & non-discretionary accruals of the firms [8].

The current study is based on the data collected from secondary sources. It highlights a few areas of Corporate Finance like- Cost of Goods sold(COGS), Current assets, Total assets and many others. The source of collected data is GMT Research.

In order to test & analyze whether, banks also engage in earnings manipulation or not, I have considered PNB as the case study. However, the method considered for the research purpose is a mathematical one developed by Prof. Messod Beneish. The model is known as Beneish's M-Score Model. According to him, the managers of the

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companies get huge incentives to manipulate the reported earnings of the firms. The M-Score Model however has been developed based on 5 variables & 8 variables. The variables represent a relationship between different factors. However instead of using the model for computing the manipulation of the firms, it has been utilized to measure the manipulation level of the banks.

Control factors of M-Score
SGA: Selling, General & Administrative goods
CA: Current Assets
DSRI: Days Sales in Receivables Index
GMI: Gross Margin Index
AQI: Asset Quality Index
SGI: Sales Growth Index
DEPI: Depreciation Index
SGAI: Selling, General & Administrative goods Index
LVGI: Leverage Index
TATA: Total Accruals to Total Assets

Source: GMT Research, Beneish, [10]

Table I: Different control factors of M-Score model

The DSRI establishes a relationship between the increase in the days of receivable and the revenues of the firms. Normally when the days of receivable increase, managers tend to increase the recognised revenue by inflating the situation.

GMI plays a significant role in measuring the future prospect of the banks. If it is negative, that indicates a negative image about the firm. This creates a tendency to manipulate the earnings to recreate a positive image.

AQI helps in the estimation of the portion of non current assets (except PPE) to the total assets. It is said that, if AQI>1, it indicates that more cost deferral has taken place. This is not a good sign for the future due to which manipulation can be done by the managers.

SGI establishes the relationship between the sales & growth of a bank. If SGI is more , it indicates a good financial condition. On the other hand, it creates pressure on the managers to raise their performance level which instigates the process of earnings manipulation.

DEPI analyses the relationship between the Net Fixed Assets & its depreciation. However in the banking sector, the chances of measurement of DEPI is limited to certain cases in comparison to the companies.

SGAI shows how the expenses related to sales, administration & other general expenses are correlated to the overall sales. The more it increases, the more degrowth in the financial situation of the banks.

LVGI is one such measure to calculate the manipulation in earnings. It helps to identify the ratio between the total debts & the total assets.

TATA finds the relationship between the total accruals in relationship to the total assets. As discussed before, Total accrual is used to measure the earnings management. Here also it is used to identify the earnings manipulation of the banks.

The result of the M-Score depends on the above mentioned variables. The formula developed for the 5 variable model & the 8 variable model are derived by multiplying the control factors by their respective weights.

Beneish M-Score 5 variable model= -6.065 + 0.823*DSRI + 0.906*GMI + 0.593*AQI + 0.717*SGI + 0.107*DEPI

This model excludes SGAI, TATA and LVGI

Beneish M-Score 8 variable model= -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI – 0.172*SGAI + 4.679*TATA – 0.327*LVGI

Source:(Messod D. Beneish, 1999) [23]

If observed properly, it is visible that the model is based on 2 types of variable: Dependent and Independent variables. The value of M-Score model depends on the degree of changes in the different independent factors. According to the creator of the model, the independent variables are the Control factors due to which the dependent variable is influenced. Here, the Dependent variable is Earnings management and the Independent variables or the control factors are the different parameters of the model like: DSRI, GMI, TATA etc. To understand the relationship between the Independent variable and the control factors two hypothesis has been framed.

III. ANALYSIS

For the analysis purpose , the hypothesis developed for the study is:

H0: There lies a positive relationship between the current performance of the banks & its earnings management.

H1: The financial condition of the banks & the process of earnings management is negatively correlated.

The Null hypothesis (*H0*) assumes that there lies a positive correlation between the current performance of the banks and the degree of earnings management activities. This indicates, with an increase in the performance of the banks, there will be an increase in the activities related to earnings management & vice versa.

On the other hand, the Alternative hypothesis (*H1*) assumes that there lies an inverse relationship between the current performance of the banks & engaging in earnings

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management; i.e. if the current financial condition of the banks improves, banks will indulge in earnings management relatively less and vice versa.

One thing to be noted here, is the study & the hypothesis has been restricted to the current financial scenarios of the banks. This is because the future financial conditions will be based on assumed values which will not provide us the appropriate picture.

The data collected is from the financial reports provided by PNB from financial year 2016-2018. The source of the information is Dion Global Solutions Limited. To apply the Beneish M-Score method, few information have been collected from the financial reports of the Bank. These are the parameters which have an impact on the control factors mentioned above. The value of the parameter has been collected from the financial year 2016-2018. However, the value of the control factors has been calculated & a comparative analysis has been made between financial year 2016-17 & 2017-18.

Parameters			
Year	**March 2018**	**March 2017**	**March 2016**
Net Sales	47995.77	47275.99	47424.35
Cost of Goods	0	0	0
Net Receivables	0	0	0
Current Assets	559174.8	527331.86	504321.83
Plant,Property,Equipment	62,799.00	62,214.00	52,028.00
Depreciation	576.17	425.04	395.73
Total Assets	747835.07	708064.86	651116.51
SGA expenses	3764.11	3533.63	3150.78
Net income	83733.18	79817.54	79204.98
Cash Flow from Operations	106,101	103,512	257,506
Current Liabilities	21678.86	16016.21	16273.94
Long-Term Debt	703076.94	662467.36	612806.37

Table II: Values of Control factors

Note: It is important to mention here that, since the value of the parameters are collected from the financial reports of a bank, the value of Cost of Goods Sold & the Net Receivables(short term) is Zero. That indicates that, this information doesn't exist in the case of a bank.

As the case study is based on banks which is not a manufacturing concern, few parameters for e.g. Cost of Goods and Net Receivables (short term) can be Zero. In banks no production takes place due to which there is no existence of cost of goods and net receivables. However, net receivables can be realized in the long term. The Beneish's M-Score model was framed mainly for manufacturing organizations. So it is assumed that, all information are available from the final accounts of a particular financial year. However, since we have considered the concern for banking sector, all information are not applicable in the model.

As mentioned above, the control factors have been measured by using the above parameters, the following is the set of derived results of the control variables.[27][28]

Derived variables				
Variables		**2018**	**2017**	**2016**
Other Liabilities/Total assets{TA-(CA+PPE)}		125,861.27	118,519.00	94,766.68
Comparison between 2017-18 & 2016-17				
Variables	***2017-18***	***2016-17***		
DSRI	0	0		
GMI	0.00002115238623	0.00002108621415		
AQI	1.005475158	1.150053326		
SGI	1.015225065	0.9968716493		
DEPI	1.339821044	0.8989047035		
SGAI	1.049249816	1.12502908		
TATA	-0.0334636858	-0.2738388864		
LGVI	1.011392149	0.9917881368		

Table III: Comparative analysis of 2016-17 & 2017-18

In the above table,the value of DSRI for both year 2016-17 & 2017-18 is zero. This is because in case of banks we don't get the value of Net Receivables. Normally in case of banks, the net receivables are considered for a long term period. The value of GMI has decreased in 2017-18 in comparison to 2016-17. This indicates a poor condition of the bank. On the other hand, as mentioned before as we are only concerned with the current scenario, future values are not considered here. Simultaneously it also indicates the engagement of the bank in earnings management activities.

The AQI has decreased in 2017-18 against 2016-17. However, in both the cases, the value is more than 1 which indicates that the bank has tendencies of cost deferral. When compared between the financial years, the capacity has decreased in the next phase than the previous one i.e. from 1.150053326 to 1.005475158. This also indicates that the capacity of the bank in paying the expenses in advance has increased. However, since the value is more than 1, it indicates that there are tendencies of manipulation of earnings by the bank.

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The value of SGI has increased in 2017-18 in comparison to 2016-17. Moreover, the value of 2016-17 i.e 0.9968716493 indicates no manipulation has been done. However the value 1.015225065 in 2017-18 indicates there are chances of manipulation done by the bank. The more the value is closer or more than 2, the chances of manipulation in earnings of the bank is greater [6]. This also indicates, assuming that there is zero COGS & Net receivables, the bank has started to indulge in the earnings management activities in the next financial year. However a new result would have been fetched in case of a manufacturing organization with all the parameters considered.

Through the DEPI, the rate of depreciation can be determined. The derived value of 2017-18 has increased than 2016-17. This shows that the rate of depreciation has slowed in comparison to the previous year. This is a good sign for the bank in the current year. However in the case of banks the scope of calculation of Depreciation is limited. In the given data set up it can be also said that, the assets on which depreciation has been charged are in good condition in the next financial year with comparison to the previous financial year.

The SGAI shows that, all expenses other than COGS has decreased in 2017-18 in comparison to 2016-17. This is a good sign which indicates the cost curtailment process. However it might also lead to a compromise of the financial quality of the bank. This is because too much decrease in the cost at the cost of sacrificing quality also don't highlight good condition of the bank.

In both the financial years, the LGVI shows a negative trend. This indicates that in both the situation, the bank has not been able to use debt factor to its benefit. If debt factor is utilised properly, the banks can improve its performance level, based on which it can even pay off all its liabilities. However, here it shows that the bank has under utilised its debt factor.

The last control factor is the TATA. In either of the financial years, the value of TATA has decreased and less than This indicates that, the total accruals is less in comparison to cash. This also indicates less chances of manipulation. However the availability of more cash indicates the under utilisation of cash also leading to idle resources.

IV. RESULTS AND INTERPRETATION

The M-Score in the current study is based on both the 5 variable factor as well as 8 variable factor. According to Beneish M-Score Model, the scores of both 5 factore & 8 factor stands as follows:

M SCORE	2017-18	2016-17
5 Variable Model	-5.19369107	-5.254028616
8 Variable Model	-4.041889477	-5.181895642

Table IV: Results of M-Score model

According to the model, the greater the value, the higher are the chances of manipulation. In this case, the three periods under consideration is from 2016-2018. The final value of the M-Score is dependent on the different control factors of the model:

a. The absence of Cost of goods and the Net receivables for the current period shows the financial condition of the bank has degraded. In case of a manufacturing organization, the COGS wouldn't be zero as well as there would be some value of Net receivables due to which the financial condition might have improved in the current financial year,

b. The result derived from the AQI highlights the fact that the cost deferral capacity of the bank has decreased which again indicates the degrowth in the bank's current performances in terms of operations.

c. SGI plays a major role in identifying whether any manipulation is taking place or not. Results show that, SGI is very close to 2 which is the benchmark. It also highlights that, where in the year 2016-17 the value was below 1, in the year 2017-18 the value moved towards 2. This clearly shows the indulgence of the bank in manipulation of earnings.

d. The analysis also identifies the under utilization of the debt factor which has increased in 2017-18 in comparison to 2016-17. This also indicates the fall in the current performance of the bank.

e. Cash management is one of the major parameters to judge the current performance of any organization. In the current study, it is clearly visible that, although the accruals are less in comparison to the cash, it will highly impact on the day to day activities of the bank. This also shows that, the bank is unable to make proper utilization of its cash reserve.

The standard benchmark of M-Score model to judge the degree of manipulation is -1.78. Any score above -1.78 indicates the indulgent of the bank in the manipulation activities. A less than -1.78 score indicates that, the bank is less likely to be a manipulator.

For both the 5 variable & 8 variable model, the scores are less than -1.78. This indicates that, the bank is less likely to engage in manipulation. However if observed, the values of both the models have increased in 2017-18 in comparison to 2016-17. This can be interpreted that, the bank is most likely to engage in the manipulation of earnings even though the entire value is less than -1.78. The increase of the scores present a trend towards earnings management by

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firms. Also, out of the 8 control variables, only 2 variables i.e. DEPI & SGAI shows a positive trend in 2017-18 in comparison to 2016-17. It clearly indicates that, the current performance of the bank from all perspective have degraded. However, in the case of positive Net receivables, the result could have improved if not the entire scenario.

V. CONCLUSION

The objective of this study is to identify the relationship between the current performance of the banks with earnings management activities. The detailed objective of the study is to find the correlation (positive or negative) between its financial condition & earnings management. The Beneish M-Score has been utilized to identify whether the PNB of India has manipulated their reported earnings or not. According to M-Score if the result is -1.78 or more, there are high chances of manipulations by the bank [29]. According to the 5 variable model which excludes SGAI, TATA and LVGI, both the results of 2016-17 & 2017-18 are very than -1.78. This can be interpreted as no situation of manipulation by the bank. However, the results simultaneously highlights that, in comparison to 2016-17, the value of 5 variable model is more in 2017-18. This shows that, the bank has a tendency to manipulate the earnings in the next financial year. The same trend has been observed in 8 variable model which includes all the 8 factors. Here also, the result of M-Score model has increased towards -1.78 in the next financial year in comparison to the previous financial year. Also it has been observed that, the performances & the financial condition of the bank has deteriorated in the financial year 2017-18 in comparison to its previous year.

The results clearly shows that when on the one hand the current financial performance of the bank has deteriorated, on the other hand, the earnings management activities have increased. It can be interpreted that there is an inverse relationship (correlation) between current performances and earnings management. Thus the Null hypothesis is rejected and the Alternative hypothesis is accepted.

However, the current study is under certain limitations. The first limitation is that, the Beneish model had been created from a company's (manufacturing organizations) point of view. Whereas, in the current work, it is a bank that is being considered as a case. Secondly, few factors like COGS & Net Receivables (short term) are not applicable for banks. Due to this, the results are subject to limitations.

Through this paper, it is clear that banks can engage in manipulations of earnings even if the level of it is less. Practically, PNB's financial condition has shown a fall in its performances in 2017-18 because of which it didn't reveal its correct condition in front of its stakeholders. The findings of the paper can be reexamined by considering control factors which are directly applicable to the banking sector.

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