



## A STUDY ON WEB-BASED REPORTING SYSTEM IN BANKING SECTOR

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**ABSTRACT** The present study examines the status of web-based reporting in the banking industry. It also explores the pattern and factors affecting web-based reporting. For this study content analysis has been carried out for finding the level and extent of web-based reporting. A web-based reporting index has been developed into three major headings namely, general information index, financial information index and presentation information index. Ordinary least square regression is used for checking the factors affecting web-based information. The study had drawn two major findings. First, finding reveals that there is negative and significant association between certain key factors such as productivity, shareholders profitability and liquidity of the banks. Second finding reveals that other factors such as profitability, leverage and growth are not significantly associated with web-based reporting of the banks. This paper is constructed based on the concept of transparency and reporting on the web that may facilitate the investors and stakeholders.

**KEYWORDS :** Web-based reporting, banking industry, profitability.

### I. INTRODUCTION

In globalization, most of the listed companies are connected with their stakeholders through internet. Company's information is available in a single click away. Corporate web-based reporting system has emerged as one of the most popular source of communication for disclosing and providing corporate financial information.

With the tremendous growth in the number of internet users there is an increasing demand from the stakeholders worldwide to provide information on the company websites. The most important advantage is, while in the hard copy information can be provided only in the static form, i.e. words and pictures only, web-based reporting system can provide audio and video. It has also led to challenges for the companies, accountants, regulators and web-administration, who ultimately provide the information. Particularly web-based reporting has affected the capital market and equity securities market. The number of investors has increased through the use of internet for trade and investment activities. The change in accounting information through internet is expected to bring changes in accounting models, way of communication and finally the profession itself.

A number of studies have investigated different sectors but till now not even single study found on web-based reporting system in banking sector. However, in banking sector, websites disclosure and using internet as medium of gathering information by the users became very common. Hence banking sector selected for the study.

### II. LITERATURE REVIEW

In the present era, acquiring and accessibility of information required by anyone is become very easy. Internet as a source of information distribution is relatively new; still there are ample numbers of papers on the internet as a means of information distribution. Disclosure of financial information, i.e. web-based financial reporting, has also been researched widely to understand requirements and usefulness. Unerman & Bennett (2004)<sup>20</sup> also carried out a study to examine the wide reach of the financial information to the stakeholders through the use of internet reporting.

Davey & Homkajohn (2004)<sup>5</sup> also found large variations in Thai companies disseminating information over the internet. Study by Feketeet al. (2009)<sup>8</sup> implied that there was association between corporate characteristics and internet reporting disclosures of the firms.

As financial reporting on the internet has evolved, that it is important to maintain a single standardized accounting body. The study revealed the need for standardization of financial reporting on the internet. This led to the development of Extensible Business Reporting Language (XBRL) for the same purpose. The accounting standards and practices adopted also affect the reliability and integrity of financial information. Use of generally accepted accounting practice (GAAP) or International Financial Reporting Standards (IFRS) for internet financial reporting and the location selected for the disclosure of the

information may make it difficult to assess available information. It is also a debatable issue whether internet financial reporting can be a direct substitute for the traditional hard copy form for all the financial statements of the companies.

Ismail (2012)<sup>10</sup> discussed the benefits of website reporting as inexpensive, easier and timely investment decisions. Debreceny et al (2001)<sup>6</sup> carried out a study in France, Germany and the UK for financial reporting of information through World Wide Web and discussed various challenges related to auditing and electronic presentation. Procter & Symonds (2001)<sup>18</sup> suggested that graphics influence the usability of web sites.

In India, only a limited number of studies have been carried out to find the level and extent of web-based corporate financial reporting. Studies relating to any specific sector were also limited. Present study uses a more comprehensive web-based reporting system on a particular sector, i.e. banking sector.

### III. OBJECTIVES OF THE STUDY

1. To understand the concept and extent of web-based reporting system of banking sector on the corporate websites.
2. To investigate the relation between the web-based reporting and financial factors like shareholders and firm profitability, leverage, liquidity, and productivity of the company
3. To study the impact of web-based reporting on different stakeholders.

### IV. RESEARCH METHODOLOGY

In order to select the sample of top banks in India according to market capitalization on National Stock Exchange are taken for the study. Data has been collected from the respective websites of the banks that were searched with the help of Yahoo and Google. Financial data is collected from Centre for Monitoring Indian Economy (CMIE) database named Prowess. Data has been collected from October 2015 to December 2015. The present study is to examine the web based reporting through the general, financial and presentation indicators which were generally available all the time.

The present study uses content analysis for measuring the level of web-based reporting about banking industry in India. Neuendorf (2002)<sup>16</sup> identified content analysis as "the systematic, objective quantitative analysis of message characteristic". The author found that there was a constant growth of usage and variety of content analysis methodology. Duriau, et al. (2007)<sup>7</sup> revealed that the content analysis is useful in management research.

Web-based reporting index is an association of three indexes: they are general reporting index, financial reporting index, and presentation reporting index. These indexes are formed to carry out extensive literature review. For the data analysis, content analysis was carried out followed by correlation and multiple regression analysis. Before using content analysis, reliability of the data has been checked. Reliability

refers to the extent to which a measuring procedure yields the common results on repeated trials (Carmines & Zeller, 1979)<sup>21</sup>. Reliability of the data was examined and the value 0.92 signifies that not much variation was found in the results. Thus, the coded data found reliable in nature. Another important concern is that the validity of the data. Carmines & Zeller (1979)<sup>21</sup> refers to that validity of the data is actually measuring what exactly the researcher wants to examine. For this purpose literature review has been carried out and indicators are chosen based on well-defined parameters. Computer coding is also widely used but is applicable only when the data is available in written, audio or video format. In the present study, the input data consists of websites of the companies that cannot be collected by computer. Therefore, the study used manual coding.

**Table I: List of variables used in the study**

Variables	Description
ATO	Activity Turnover Ratio
ROA	Return on Assets
ROE	Return on Equity
GR	Growth Rate
CR	Credit Ratio
D/E	Debt-Equity Ratio
GII	General Information Index
FII	Financial Information Index
PI	Presentation Index
WBR	Web Based Reporting

Tools used for Analysis: Corporate disclosure theories have suggested that there is association between web-based reporting and profitability, productivity, growth, leverage and liquidity of the Banks. So, regression equation has been formed. Based on the above literature, formulated the hypothesis for the study as shown in Table II.

**Table II: Hypothesis of the study**

Variables	General Information Index	Financial Information Index	Presentation information Index	Web-based Index
<b>Hypothesis</b>	<b>Hypothesis</b>	<b>Hypothesis</b>	<b>Hypothesis</b>	<b>Hypothesis</b>
CR	H1a	H1b	H1c	H1d
D/E	H2a	H2b	H2c	H2d
ATO	H3a	H3b	H3c	H3d
ROA	H4a	H4b	H4c	H4d
ROE	H5a	H5b	H5c	H5d
GR	H6a	H6b	H6c	H6d

**V. RESULTS AND ANALYSIS**

The analysis of the data given on the websites of the sample companies has been coded by using the DAUB approach (Daub, 2006, 2007)<sup>3&4</sup>. Websites were coded by using the binary coding as yes and no basis, encoded as 1 and 0 respectively. The reliability of the content analysis is carried out by using the percentage method and Cohen's kappa (Cohen, 1960) test. Results indicated that the total percentage method was 0.92, which was considered acceptable standard.

**Table III: Descriptive statistics of banking industry**

	Min	Max	Mean	Standard deviation
ATO	0.000	2.351	0.389	0.369
ROA	-0.418	0.161	-0.007	0.103
ROE	-7.366	0.897	-0.228	1.267
GR	-3.278	25.732	2.504	4.423
CR	0.003	124.357	4.383	16.816
D/E	-3.148	107.057	3.069	14.332
GII	2.000	48.000	24.804	7.912
FII	0.000	23.000	12.054	5.415
PI	0.000	9.000	4.696	1.747
WBR	2.000	67.000	41.554	13.839

The above Table III tells that descriptive statistic results of banking industries. Mean value of WBR is 41.554 with 2 as minimum and 67 as the maximum number, indicating a high standard deviation in the data. It indicates that there are many banks which are reporting much less or more information in comparison with the average value. ATO is a minimum of 0 and maximum is 2.351, with a standard deviation of 0.369, indicating that the data does not deviate much from the mean value. ROA with minimum of -0.418 and 0.161 maximum shows few

of the banks suffering losses.

**Table IV: Correlation probability of banking industry**

	ATO	ROA	ROE	GR	CR	D/E	GII	FII	PI	WBR
ATO	1									
ROA	0.29*	1								
ROE	0.16	0.38*	1							
GR	-0.04	-0.03	-0.41*	1						
CR	-0.16	0.17	0.05	-0.10	1					
D/E	-0.11	-0.13	-0.84*	0.45*	-0.04	1				
GII	-0.07	-0.39*	-0.17	0.08	-0.12	0.14	1			
FII	-0.17	-0.06	-0.29*	0.14	-0.09	0.24*	0.72*	1		
PI	-0.175	-0.32*	-0.39*	0.15	-0.16	0.28*	0.68*	0.82*	1	
WBR	-0.13	-0.28*	-0.26*	0.12	-0.12	0.21	0.94*	0.91*	0.83*	1

\*significant at < 0.01, \*\* significant at < 0.05 and \*\*\* significant at < 0.10 respectively.

Table IV explains that the correlation matrix of the bank industry. Result indicates that ROA is significantly and negatively correlated with WBR -0.28 at 5% level of significance, indicating negative association between productivity and web-based reporting. ROE is negatively associated with WBR, i.e. -0.26 at 5% percent level. It implies that profitability of the banks is showing significant negative association with ROE. Results also report that GR is negatively associated with ROE -0.41 at 1% level of significance. Leverage indicator of risk of a company has positive association, i.e. 0.459 with GR at 1% level of significance, and negative association with ROE, i.e. -0.84 at 1% level. D/E positively correlated 0.24 at 5% level. None of the independent variables are correlated with each other more than 0.70, indicating that there is no problem of multi-collinearity in the data (Kennedy, 1985)<sup>13</sup>.

**Table V: Hypothesis results**

	GII	FII	PII	WBI				
<b>Independent variable</b>	<b>Hypot hesis</b>	<b>Result</b>	<b>Hypot hesis</b>	<b>Result</b>	<b>Hypot hesis</b>	<b>Result</b>	<b>Hypot hesis</b>	<b>Result</b>
ATO	H1a (+)	Not Significant	H1b(+) )	Not Supported	H1c(+) )	Not Supported	H1d(+) )	Not Supported
ROA	H2a (+)	Not Significant	H2b(+) )	Not Significant	H2c(+) )	Supported	H2d(+) )	Not Significant
ROE	H3a (+)	Not Significant	H3b(+) )	Not Supported	H3c(+) )	Not Supported	H3d (+)	Not Supported
GR	H4a(+) )	Not Supported	H4b(+) )	Not Significant	H4c (+)	Not Significant	H4d(+) )	Not Significant
CR	H5a(+) )	Not Supported	H5b(+) )	Not Significant	H5c(+) )	Not Significant	H5d(+) )	Not Supported
D/E	H6a (+)	Not Significant	H6b(+) )	Not Significant	H6c(+) )	Not Significant	H6d(+) )	Not Significant

Table V describes the results of the ordinary least squares (OLS) regression model, taking general, financial and presentation indexes. A total of all these indicators are considered as web-based reporting index. Abdelsalam et al. (2007)<sup>1</sup> also investigated the determinants of corporate internet reporting by carrying out ordinary least squares regression. Results of the regression, taking general index as dependent variable, is showing R2 as 20.4 and adjusted R2 is 11.4, which implies that the model is poorly fitting the data. It implies that there may be few more variables which are impacting WBR, but are not used in the study. F-statistic is 2.270 significant at 5% level of significance. Durbin-Watson (D-W) statistics is 2.364, considered satisfactory. Liquidity of the banks is found to be negatively associated with general coefficient (-0.230) at 10 percent level of significance. Results do not support the hypothesis H7a. Other variables such as

ATO, ROA, ROE, GR and D/E are not found to be significantly associated with the general index. Hence, hypothesis H1a, H2a, H3a H5a and H7a are also rejected.

Taking financial index as dependent variable found R2 as 21.7 and adjusted R2 as 12.9. F-statistics for the model is 2.461 at 5 percent significant level. D-W test result is 2.346. Productivity at (-0.241) and ROE at (-0.313) are found to be negatively associated with the financial index of the company at 5% and 10% level respectively. So, hypothesis H1b and H3b are rejected, leading to not supporting the assumption that there is positive association between financial index with productivity and shareholders profitability. Oyeler et al. (2003)<sup>22</sup> found that profitability was not associated with internet reporting. Similarly, Pirchegger & Wagenhofer (1999)<sup>17</sup> have shown that profitability affected internet reporting of Austrian companies. So, the results are mixed in nature. Other variables such as ROA, GR, CR and D/E are not significantly associated with financial index. So, hypotheses H2b, H4b, H5b and H6b are rejected. Contrary to the results, Debreceeny et al. (2001)<sup>6</sup> reported a negative relationship between growth prospects and internet reporting.

Taking presentation index as dependent variable, results indicate that R2 is 26.5 and adjusted R2 is 12.9. F-statistics is 2.461, significant at 5% level. Result shows that ATO (-0.275) and ROE (-0.398) are negatively associated with the presentation index, both at 5% level. It leads to reject the hypothesis, i.e. H1c and H3c. ROA is positively (0.213) associated with the presentation index at 10% level. It implies that hypothesis H2c is supported. Other variables like GR, CR and D/E are not found to be significantly associated with the presentation index. So, the hypothesis, i.e. H4c, H5c and H6c are not supported. Results imply that the association between the presentation index and variable are not significant because the presentation style of the reporting may not play an important role in the disclosure of the information.

Taking total indicator as web-based index of the banks, implies that ATO (-0.226), ROE (-0.314) and CR (-0.217) are negatively associated with the web-based reporting index. It leads to reject the H1d, H3d and H5d hypothesis. The reason for the poor association for leverage may be because it was considered a poor proxy for firm risk. R2 is 23.9 and adjusted R2 is 15.3. F-statistics is 2.782 significant at 5% level. Durbin-Watson is 2.343, indicating that it is in the level of acceptance. Oyeler et al. (2003)<sup>22</sup> observed that there was no association between leverage and internet reporting. On the other hand, Ahmed et al. (1999)<sup>7</sup> portrays that there was no significant association between financial leverage and voluntary disclosure.

## VI. CONCLUSION

The study is a contribution to the existing literature about web-based reporting system in Indian banks. It also examined the relationship of web-based reporting with productivity, profitability, leverage, and liquidity of the banks. Present study is related to web-based reporting of only one sector i.e. banks that reduced the chances of any variation in the presentation style. There are many factors that determine the level and extent of corporate reporting on the websites of the banks. Present study would also be relevant for scholars in the field of accounting, policy makers, auditors and various stakeholders. This study covered only banking industry; however it can be extended by taking more sectors and by adding few more indicators in the study. Further study may be carried out to resolve the challenge arising from the variation in the disclosure pattern. Till now, there are no national guidelines and no regulations have been framed regarding the pattern and timeliness of web-based reporting. So, the companies are left to make their choice for any type of style and presentation format.

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