

Voluntary Disclosure Practices and Its Impact on Financial Stability of the Indian Scheduled Commercial Banks

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ABSTRACT

Mandatory disclosures are part of the requirements that need to be fulfilled by entities. Voluntary disclosure practices, however, tend to demonstrate how conscious an entity is of its responsibilities, indirectly influencing public faith in its system. This paper attempts to uncover the realm of voluntary disclosure. The study has utilized a secondary data of Indian public, private and foreign sector commercial banks covering a span of six years. Firstly, the study determined the extent of voluntary disclosure practices by constructing a Voluntary Disclosure Index using the content analysis. Then, the impact of these practices on the stability of Indian commercial banks has been analysed using multiple regression analysis. The results show a positive and significant impact of voluntary disclosure practices on the financial stability.

Keywords: Voluntary Disclosure, Financial Stability, Scheduled Commercial Banks, CAMELS

1. Introduction

Disclosure refers to the voluntary or non-voluntary communication of financial and non-financial information to business entity stakeholders (Keyur, 2012). Mandatory disclosures are based on accounting standards, regulatory forbearance and securities law (Tian and Chen, 2009). In contrast, voluntary disclosures involve additional information communicated by companies to prevent information asymmetry between insider and outsider stakeholders (Hasan and Hosain, 2015).

According to signaling theory developed by Trueman (1986), firms adopt disclosure practices to

leverage competitive advantages. Market factors also pressurize companies to implement a more transparent system, reporting, and disclosures to protect interests and build trust among stakeholders. This trend is reinforced by capital market regulators who continually impose stringent guidelines for transparency. It is observed that information, which was previously voluntary, has now become mandatory for corporations. Indian corporations are now moving towards ensuring better compliance and reporting standards to enhance their capital market prospects.

For a banking organization that utilizes public savings in various channels by allocating and mobilizing it to sectors in need, providing information becomes a crucial area of research today. BCBS, 1988, also noted that regular disclosure of information would assist market participants in assessing risk, aiding them in their investment decisions. Both voluntary and non-voluntary disclosure practices have their advantages and costs. The Agency theory (Meckling and Jensen, 1976) has been extensively researched and used due to its relevance in business information exchange (Hazaea *et al.*, 2020; Khatib and Nour, 2021). Fulfilling mandatory disclosure guidelines issued by regulatory authorities (Meckling and Jensen, 1976) can reduce agency costs and increase capital flow in countries maintaining a proper disclosure culture in their accounting practices (Gray *et al.*, 1995).

Nevertheless, companies adopt mandatory disclosure practices in accordance with regulatory requirements, and studies have shown that adhering to these guidelines reduces the likelihood of crises for enterprises (Tadesse, 2006). Information disclosure has been improving at an increasing rate due to technological and communication advancements. To keep up with the current scenario, companies are embracing non-mandatory disclosures, shifting their focus beyond mandatory disclosure to inform various stakeholders about aspects such as intangibles and earnings guidance (Hutton, 2005). There are also numerous advantages for companies in disclosing this non-voluntary information. For example, disclosing societal and environmental practices, which are non-financial information, can enhance stakeholders' trust in the company. In doing so, companies must weigh the benefits, including reduced litigation expenses, political costs, and enhanced liquidity, against the competitive disadvantages of these disclosure practices (Gray *et al.*, 1995).

Given the arguments presented by relevant studies, researchers have consistently sought to determine the extent of voluntary disclosure practices adopted by companies. This study also aims to address this phenomenon through a comparative analysis of disclosures made by Indian commercial banks using a large study period of six years. In addition to assessing the extent of disclosure practices, the study aims to analyse the impact of these voluntary disclosure practices on the financial stability of Indian banks.

Section 2 describes the status of disclosure practices by banking companies in their financial and non-financial reporting. Section 3 and 4 describe the theoretical background and literature review. Furthermore, section 5 outlines the methodological structure used to analyse the extent of voluntary disclosure practices and their impact on financial stability. Results for the extent of disclosure practices are presented and described in section 6. Subsequently, section 7 engages in a discussion where the findings contribute to this area of literature. The conclusion is given in section 8.

2. Scenario of Disclosure Practices by Banking Institutions

Companies have been reporting both their financial and non-financial information on a mandatory and voluntary basis. Under Section 29 of the BRA 1949, banks are required to close their books of accounts every year as of March 31, preparing balance sheets and profit and loss accounts in vertical forms as outlined in the Third Schedule of the BRA 1949 (Banking Regulation Act, 1949). Furthermore, the RBI, in 1997 and 2000, instructed commercial banks to make specific disclosures in financial statements through 'notes to accounts' to enhance disclosure standards and align their balance sheets with international norms.

According to Annexure XII of the revised Clause 49 of the listing agreement, companies, including banks, are obligated to disclose various mandatory items in their Corporate Governance Reports (CGR). These items include the Code of Governance, Board of Directors, Audit Committee, Nomination and Remuneration Committee, Stakeholders' Grievance Committee, General Body Meeting, Specified Disclosures, means of communication, and general shareholder information. Additionally, Section 135 of The Companies Act 2013 has played a significant role in improving Corporate Social Responsibility (CSR) reporting practices in India. India has made history by being the first country in the world to legislate CSR and its reporting in the annual reports of specified companies.

These are mandatory disclosures that companies are required to maintain in their financial records. Voluntary disclosure practices do not require compliance; however, these practices have a significant impact on financial performance and efficiency (Hossain *et al.*, 1995; Hossain and Reaz, 2007). Numerous studies exploring this research area have demonstrated this impact. From an analytical perspective, the Indian banking sector has improved in disclosing non-mandatory information, with private sector (76%) commercial banks leading public sector (60%) commercial banks (Asthana and Dutt, 2013). Similar trends have been observed in listed banks in emerging economies like Bangladesh (Al-Mamun and Kamardin, 2014).

Additionally, Aikaeli and Rashid (2015) found a positive and significant association between profitability and voluntary disclosure practices in the Kenyan banking sector. However, some

studies present opposite results regarding voluntary disclosure. Al-Homaidi *et al.* (2020) demonstrated, in their empirical study of Yemeni Islamic banks from 2005 to 2014, that voluntary information disclosure does not significantly enhance bank profitability. Similarly, certain Indian studies claim a negative association between voluntary disclosure and efficiency (Sharma and Rastogi, 2021).

The existing literature highlights diverse perspectives on voluntary disclosure across different financial institutions and regions. While some studies report a negative correlation between voluntary disclosure and financial performance or efficiency (e.g., Al-Homaidi *et al.*, 2020; Sharma & Rastogi, 2021), others emphasize its positive impact on profitability and corporate transparency (e.g., Nathan *et al.*, 2021; Aggarwal, 2023). The effectiveness of voluntary disclosure appears to be contingent upon the regulatory environment, governance practices, and institutional frameworks in different economies. Future research may further explore these contextual factors to provide a more comprehensive understanding of voluntary disclosure dynamics.

A plethora of research studies has focused on voluntary and non-voluntary disclosures in the Indian economy. However, there is a need for fresh evidence on these practices that would be useful to stakeholders in decision-making. This study covers a more extended period, addressing a missing point in previous Indian literature. Additionally, a comparative analysis is conducted by dividing the period into two parts, measuring the extent to which voluntary practices are enhanced by Indian banking companies. There are significantly fewer studies covering the impact of voluntary disclosure on performance, efficiency, and stability in the Indian industry. The study aims to determine the extent of voluntary disclosure practices using a voluntary disclosure index. Furthermore, it seeks to identify any improvement in publishing these voluntary disclosure practices by dividing the sample into two parts. Finally, panel data regression analysis is performed to assess the impact of these voluntary disclosure practices on the financial stability of Indian commercial banks.

Table 1: List of the PSBs and PvtSBs and FSBs operating in India throughout the study

Sr. No.	Abbreviation	Public sector banks	Abbreviation	Private sector banks	Abbreviation	Foreign sector banks
1	BOB	Bank of Baroda	AXIS	Axis Bank Ltd.	ABB	AB Bank Limited
2	BOI	Bank of India	CUB	City Union Bank Ltd.	ADCB	Abu Dhabi Commercial Bank Pjsc

3	BOM	Bank of Maharashtra	DCB	DCB Bank Ltd.	AEBC	American Express Banking Corp.
4	CNRB	Canara Bank	FEDB	Federal Bank Ltd.	BBK	Bank Of Bahrain & Kuwait B.S.C.
5	CBI	Central Bank of India	HDFC	HDFC Bank Ltd.	BOC	Bank Of Ceylon
6	INDB	Indian Bank	ICICI	ICICI Bank Ltd.	BONS	Bank of Nova Scotia
7	IOSB	Indian Overseas Bank	IINDB	IndusInd Bank Ltd.	BNPP	BNP Paribas
8	P&SB	Punjab and Sind Bank	J&KB	Jammu and Kashmir Bank Ltd.	CBNA	Citibank N.A
9	PNB	Punjab National Bank	KRB	Karnataka Bank Ltd.	CWBA	Commonwealth Bank of Australia
10	SBI	State Bank of India	KMB	Kotak Mahindra Bank Ltd.	DBSB	DBS Bank India Ltd.
11	UCO	UCO Bank	DLXB	Dhanluxmi Bank Ltd.	DBAG	Deutsche Bank AG
12	UNBI	Union Bank of India	SINDB	South Indian Bank Ltd.	HKSB	Hongkong and Shanghai Banking Cor. Ltd.
13			IDFC	Tamilnad Mercantile Bank Ltd.	JPMC	JP Morgan Chase Bank National Association
14			KVB	Karur Vyasya Bank Ltd.	MASP	MASHREQ Bank PSC

15			RBL	RBL Bank Ltd.	MUFG	MUFG Ban k Ltd.
16			YES	Yes Bank Ltd.	PTIND	PT Bank Maybank Indonesia TBK
17			IDBI	IDBI Bank Ltd.	SCOT	Royal Bank of Scotland
18					SBMB	SBM Ban k (India) Ltd.
19					SDCB	Standard Chartered Bank
20					UNOB	United Overseas Bank Ltd.

Source: Compiled by Researcher

3. Theoretical Background

In the general regulation theory, public regulation is justified by market failure that can result from the presence of market power, the importance of externalities, and/or asymmetric information. Applying this general theory, disclosure regulation is usually associated with informational asymmetry or some form of externality (Healy and Palepu, 2001). Informational asymmetry leads to adverse selection between savers and entrepreneurs, causing misallocation of capital. Entrepreneurs have better information and incentive to inflate the value of their investment opportunities.

Signalling theory also suggests that managers have an incentive to disclose their insider information voluntarily to reduce the information asymmetry (Healy et al., 1999; Healy and Palepu, 1999, 2001). The credibility of these voluntary disclosure increases if it is audited (Titman and Trueman, 1986).

There is evidence that firms have several incentives to voluntarily disclose their information in annual reports. For example, signalling, financing costs, agency costs, management opportunism, etc. are some of the incentives for that (Hossain and Taylor, 2007). Signalling theory was first applied to explain uncertainty in labour market (Spence, 1973) and consumer behaviour (Akerlof, 1970) studies. Then, it has been used in financial reporting literature to help in understanding of accounting policies choices decisions (Healy et al., 1999), voluntary disclosure of information (Healy and Palepu, 2001; Skinner, 1994; and Trueman, 1986).

4. Literature Review and Hypothesis Development

Disclosure-related literature has been developed into a distinct branch of economic and accounting research (Frolov, 2007). Enhanced disclosure practices lead to better transparency and stronger market discipline in the banking system. This disclosure reduces the information asymmetry between those having privileged information and those of small investors. Another benefits of disclosure practices are that it would facilitate more efficient monitoring as sufficient disclosure is necessary for investors to exercise an effective disciplinary role.

As the taxonomy suggested by Verrecchia (2001), the answer to three major research problems that are confronted by the literature is as follows.

- Whether information disclosure is economically efficient in general: In this regard, two theorists have given an explanation for the desirability of information disclosure. Kunkel (1982), on the one hand, shows that both exchange and product information disclosure may be preferred as these can help in alternative decisions of efficient allocation of resources to a specific product. Diamond (1985), on the other hand, suggests that exchange related information is costly and only costless information disclosure practices are preferred because it will benefit the acquisition of private information.
- Secondly, the effect of information disclosure on the aggregate behaviour of economic agents: After having plausible assumptions about the diversity of market participants, the literature attempt to explain this phenomenon in the association of information disclosure and market participants.
- Third and finally, the circumstances surrounding the decision to make private information public: A standard argument here is that management's decision about whether to disclose or not to disclose the private information of banking organization is based on cost-benefit analysis of information disclosure to the public (Frolov, 2007). The direct evidence for this explanation is provided in literature that before offering the public debts and equity, firms increase the intensity of their disclosure efforts (Frankel et al.,1995; Healy et al.,1999; and Long and Lundholm,1993,1996).

This shows that information disclosure is socially desirable (Diamond, 1985; Frolov, 2007). The analysis of its cost-benefit leads to partial or no-disclosure. So, a question arises here is that whether the information should be mandatory or voluntary?

In literature, for examining the extent of disclosure practices both voluntary and mandatory disclosures items were tested and a combined disclosure index was created on that basis (Akhtaruddin, 2005; Barako, 2007; Baumann and Nier, 2003; Hossain, 2000; Hossain, 2001; and Hossain, 2008). Transparency and disclosure are important ingredients of banking stability. Enhanced bank disclosure has been evidenced that it would be able to make a banking crisis less likely to happen (Hoggarth et al., 2003; Tadesse, 2006). Nier and Boumann (2006), have evidenced that due to higher disclosure regime, banks are less likely to take excessive risks. In a cross-country comparison across 49 countries, Tadesse (2006), found that the banking crisis was less likely in those countries having greater compliance with regulated disclosure and transparency.

On the other side (Kaufman, 1994; Calomiris and Mason, 1997; Gilbert and Vaughan, 1998) greater disclosure may generate negative externalities in banking. Disclosure may lead to interpretation of specific information about banks' financial conditions as an indication of widespread problems in the banking system, leading to bank runs or stock market collapse. Banking disclosure and stability are so much controversial on transparency-stability and transparency-fragility hypotheses.

In the context of banking, following the theory of information asymmetry, a large body of literature attributes the problem of bank instability (Diamond and Dybvig, 1983; Bernenke and Gertler, 1990). Healy and Palepu, (2001), suggest that one of the solutions to the problem of information asymmetry is regulatory disclosure.

Pointing to the commitment effect of bank disclosure as its benefit, banks exercising more information disclosure choose lower default risk in equilibrium. The idea behind this view is that a bank that discloses its risk profile publicly, exposes itself to market discipline and investors will penalize that bank for choosing higher risks. This effect will be absent if investors do not have information about the risk profile of banks or have limited information that is disclosed (Cordella and Yeyati, 1998; Boot and Schmeits, 2000).

Using a sample of 25 countries, Sundararajan et al. (2001) examine the relationship between the index of Basel core compliance and bank soundness which was measured by the NPLs and loan spreads. They found that this compliance has not been a significant determinant of banking soundness. The further extension made by Podpiera (2004) found better compliance reduces the NPLs. Nier (2005) found that banks that disclose more information face less risk of falling into

crisis. He also suggests that such disclosure practices are able to improve bank stability and reduce the instances of the banking crisis. His results suggest that pillar 3 of Base II accord i.e. disclosure could bring major dividends for overall financial stability.

Hossain (2008), reports the extent of disclosure practices in the Indian banking system, for both mandatory and voluntary disclosure practices. The study revealed that in disclosing mandatory items, the average score was 88 and for voluntary disclosure, the average score was 25. Further, efforts have been made to examine the association of banks-characteristics and voluntary disclosure of Indian banking institutions (Charumathi and Ramesh, 2015; Yadav and Kumar, 2018). But these studies follow a small sample including a very small period of four years and one year respectively.

A good score has been obtained by the Indian banking sector for the financial and mandatory disclosure practices as reported in the past literature (Charumathi and Ramesh, 2015; Hossain, 2008; Yadav and Kumar, 2018). Other studies in this line highlighted the importance of the voluntary disclosure index in enhancing banks' profitability (ROA, ROE, and NIM) within the Egyptian context, underscoring its role as a crucial factor in economic development (Nathan et al., 2021). While Sharma and Rastogi (2021) results showed a negative correlation between the level of voluntary disclosure and firms' efficiency. Interestingly, their findings also indicated that firms perceived discretionary disclosure as an inefficient use of resources.

There are many studies also that comparatively analysed the voluntary disclosure practices. Using the data of 32 Indian commercial banks, covering the time frame of 2013-2014 and 2017-2018, Mahajan and Singh (2022) construct a 121-item based index. And, the findings pointed towards a deficiency in the effectiveness of the voluntary disclosure reporting. The voluntary information is insufficient to adequately direct the financiers in their investment judgements and to comprehensively recognise the associated perils (Mahajan and Singh, 2022). Encompassing 336 companies OF NSE-500 Index, Aggarwal (2023) investigated the impact of corporate governance factors on the Human Resource Disclosure Index (HRDI) within the Indian companies. Spanning a timeframe of eight years covering the year of 2012-13 and 2019–2020, the study's outcomes contribute to understanding the interplay between corporate governance aspects and human resource disclosure in the Indian corporate landscape.

Based on the above discussion of the literature regarding the extent of voluntary disclosure practices along with the relationship between voluntary disclosure and financial performance and stability, the following hypotheses have been framed to further explore this area of research in Indian banks as well.

H1: There is statistically significant difference in the voluntary disclosure practices over a

period of time.

H2: There is statistically significant difference in the voluntary disclosure practices between public and private sector commercial banks.

H3: There is a positive and statistically significant impact of the voluntary disclosure practices on the financial stability of the Indian Commercial banks measured through accounting-based models.

H4: There is a positive and statistically significant impact of the voluntary disclosure practices on the financial stability of the Indian Commercial banks measured through market-based models.

5. Methodology

This chapter utilized panel data from Indian PSBs, PvtSBs and FSBs for a six-year period, divided into two phases: 2015-16 to 2017-18 and 2020-21 to 2022-23. Study has utilized the checklist of voluntary disclosure items developed by Hossain (2008) which include financial and non-financial statements. The sample of banks selected for analysis took into account the availability of each particular bank during these two phases. Based on this criterion, a total of 49 banks, comprising 12 PSBs, 17 PvtSBs and 20 FSBs, were ultimately chosen as samples for the analysis. Multiple Linear Regression analysis has been employed to assess the impact of voluntary disclosure practices on financial stability. The following model was used to compute the Voluntary Disclosure Index.

$$TD = \sum_{i=1}^n d_i$$

TD refers to total disclosure/ Disclosure Index, d_i is $_1$ if the item d_i is disclosed, $_0$ if the item is not disclosed and n presents the number of items.

Further, the following empirical specification is used to check the impact of disclosures on financial stability:

$$Risk_{it} = C_{it} + \alpha TD_{it} + \beta Bankcontrol_{it} + \lambda Macro_{it} + \epsilon_{it}$$

Where, C is constant term, TD is disclosure, Risk refers to the financial stability taken as Z-score and DD-score, Bank control is a vector of bank-specific control variable that play a significant role in banking system such as ROA (Return on assets), NPLs (Ratio of non-performing loan to total loans), CAR (Capital Adequacy Ratio), SIZE (Natural logarithm of total assets) and Macro represents the macroeconomic variables i.e., RIR (Real rate of interest), GDPG (Growth rate of

GDP).

Table 2: Variables used in the Study

Category	Variables	Specification
Dependent	Z-score, DD-score	Financial stability measures
Independent	TD	Total disclosure score
Controlling Factors	ROA	Return on assets
	CAR	Capital adequacy ratio
	NPLs	NPLs to total loans
	SIZE	Natural logarithm of total assets
	RIR	Real rate of interest
	GDPG	Growth rate of GDP

Source: Researcher’s Compilation

5.1 Voluntary Disclosure Index Construction

Voluntary disclosure consists of additional information beyond mandatory disclosure. A voluntary disclosure index has been constructed using a checklist based on the annual reports of Indian public and private sector commercial banks. To create this index, items from the study of Indian commercial banks by Hossain (2008) have been employed. The index comprises 83 financial and non-financial pieces of information, which are listed at the end of the chapter. While selecting the checklist for this index, consideration was given to previous literature and the requirements of the Indian regulatory system before finalizing it. Items beyond what is mandated under the Companies Act, 2013 (Schedule III), and the SEBI (Listing Obligations and Disclosure Norms) 2019 are included in this index.

Using the annual financial reports of Indian public, private and foreign sector banks, information was collected for two phases: 2015-18 and 2020-23. Subsequently, the disclosure score of each bank throughout the period was obtained using content analysis techniques. An unweighted disclosure index was employed during this process. In the unweighted disclosure index, all users of particular information in the annual report are considered important, irrespective of the

perceptions of users (Cooke, 1992). The unique advantage of this approach is that it does not favor a specific group of users, allowing for an independent analysis (Chow and Wong- Boren, 1987). Many studies, such as Glaum et al. (2013) and Tsalavoutas et al. (2014) have utilized the unweighted disclosure index method while analyzing worldwide databases.

6. Descriptives

6.1 Extent of Voluntary Disclosure Practices in Indian PSBs and PvtSBs and FSBs

The study period is divided into two samples to compare the initial and final phases. The first phase spans three years from 2015-16 to 2017-18, while the second phase covers the subsequent three years from 2020-21 to 2022-2023. A total of 49 banks, including 12 PSBs, 17 PvtSBs and 20 FSBs, have been included in the content analysis based on data availability over these six years.

Table 3 presents the score outcomes, indicating that during the phase 1, SBI bank scored the highest among the PSBs (61.67), while UNBI scored the lowest (33.67). In the second phase, SBI (70) and PNB (69.97) scored similar score, and UCO scored the lowest among the PSBs with a score of 53. For the PvtSBs, AXIS scored the highest with a score of 69 out of 83 in the first phase, while J&KB received the lowest score of 44. In the second phase, HDFC scored the highest with 76 out of 83, and KRB scored the lowest among the PvtSBs with a score of 54. Among the FSBs, HKSB scored 61 out of 83 as highest scorer while SDCB (46) obtained the lowest score in first phase. In second phase, with HKSB (79.98) gains the highest among the FSBs and DBAG scored a lowest of 57 in this phase.

Table 3: Voluntary Disclosure Score of the Indian PSBs, PvtSBs and FSBs

Sr No.	PSBs	Phase 1	Phase 2	PvtSBs	Phase 1	Phase 2	FSBs	Phase 1	Phase 2
1	BOB	56	69	AXIS	69	75	ABB	57	71
2	BOI	58	62	CUB	47.33	61	ADCB	53	59
3	BOM	48	57	DCB	52.33	60	AEBC	49	58
4	CNRB	44.33	60	FEDB	46	66	BBK	50	58.76
5	CBI	41	55	HDFC	65.33	76	BOC	56	66.65
6	INDB	50	60	ICICI	46.37	64	BONS	53	65

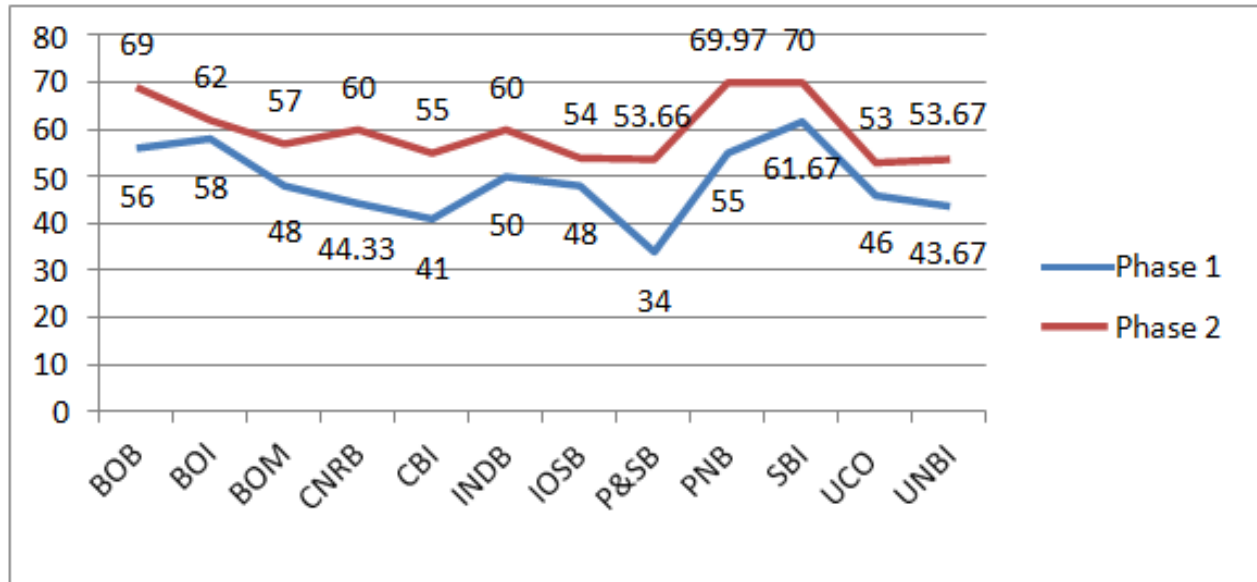
7	IOSB	48	54	IINDB	52.33	64	BNPP	54.12	63
8	P&SB	34	53.66	J&KB	44	63	CBNA	56	70.09
9	PNB	55	69.97	KRB	45	54	CWBA	51	58
10	SBI	61.67	70	KMB	47	60	DBSB	53	67
11	UCO	46	53	DLXB	55	62	DBAG	49.34	57
12	UNBI	33.67	53.67	SINDB	54	66	HKSB	61	79.98
13				IDFC	53	61	JPMC	56	65
14				KVB	48	59	MASP	54	61
15				RBL	51	62.34	MUFG	52	59.13
16				YES	58	71	PTIND	52	67
17				IDBI	58	72.37	SCOT	52	72
18							SBMB	47	58.98
19							SDCB	46	62
20							UNOB	54	63

Source: Researcher’s Compilation based on Excel Output

These values are depicted in Graph 1, Graph 2 and Graph 3 for PSBs, PvtSBs and FSBs respectively, illustrating the movement of voluntary disclosure practices between the two study phases. The analysis of the two phases indicates that Indian banks incorporated more items under their voluntary disclosure practices in the second phase as compared to the first phase. This suggests that bank management is more inclined to include these practices in their annual reports.

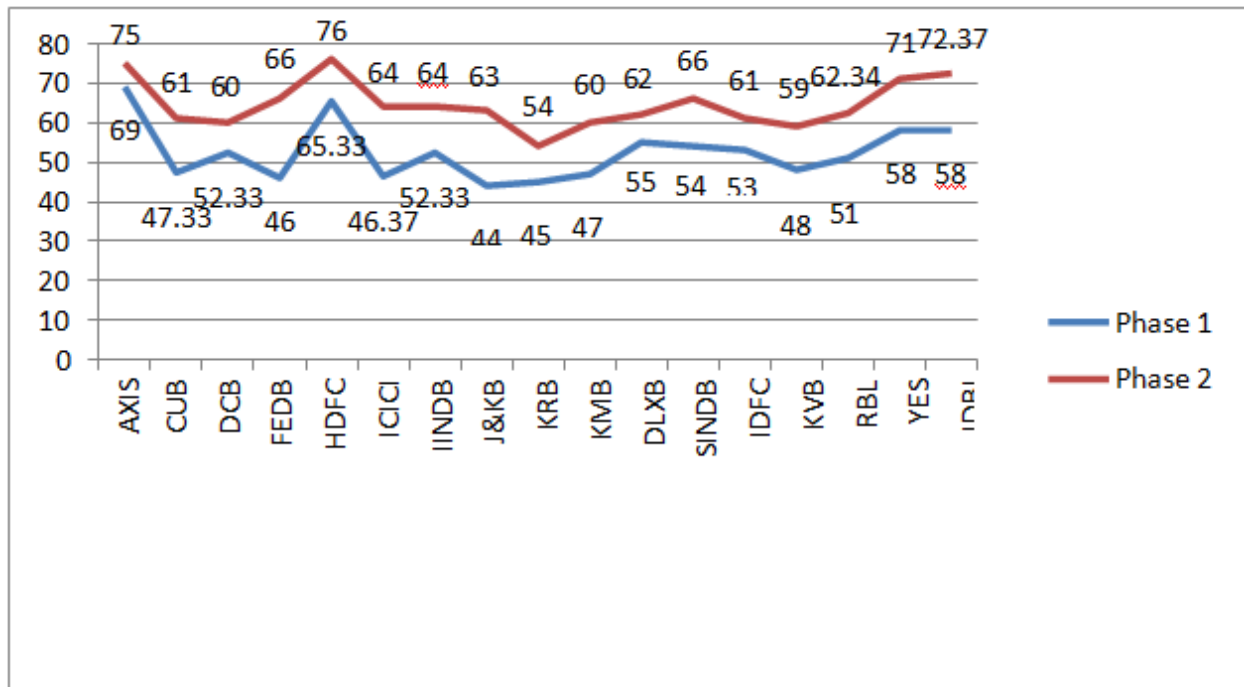
Graph 4 presents the percentage change in the level of disclosure practices for each bank during the two phases. It shows that P&SB (58%) and CNRB (35%) experienced the highest increase in voluntary disclosure reporting practices, while BOI (7%) showed the lowest increase among the PSBs. FEDB and J&KB both recorded a 43% increase, and AXIS (9%) had the lowest percentage increase among the PvtSBs. Among the FSBs, SCOT (38%) and SDCB (35%) had the highest increase in disclosure level, whereas ADCB (11%) obtained the lowest percentage increase in the level of disclosure from phase 1 to phase 2. However, despite the lower percentage increase, HKSB and AXIS banks had scored highest in both phases in the overall list, suggesting that their management is more focused on adopting these practices.

Graph 1: Score of the Voluntary Disclosure Index Obtained by the Indian PSBs

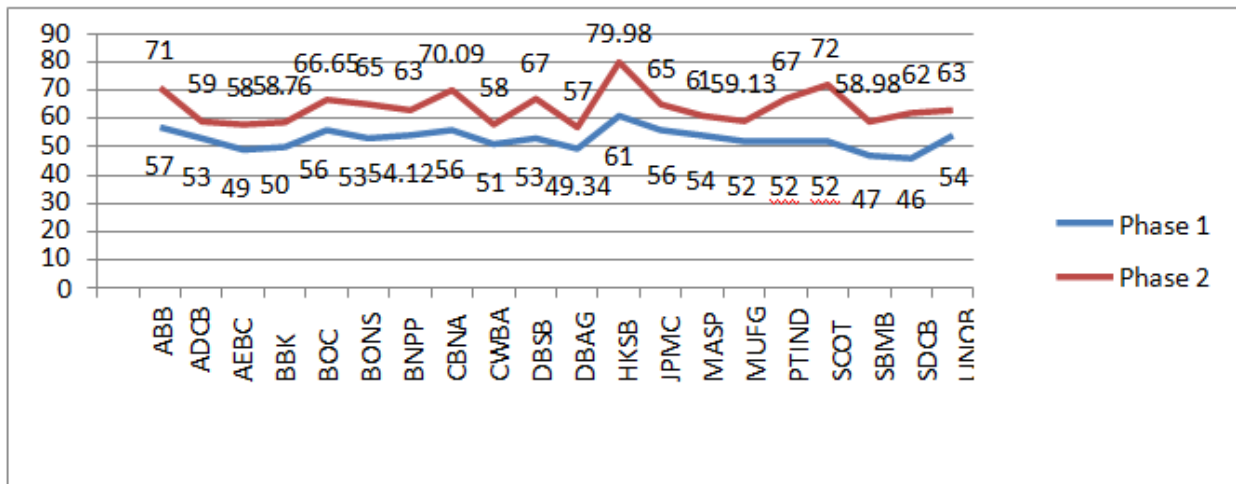


Note: Researcher's Compilation

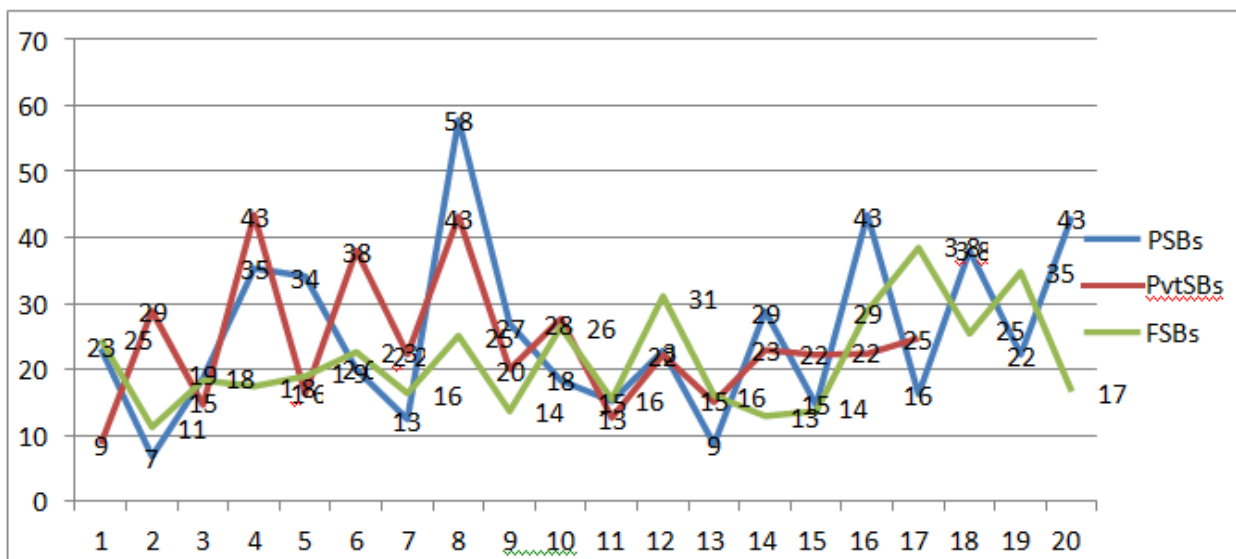
Graph 2: Score of the Voluntary Disclosure Index Obtained by the Indian PvtSBs



Graph 3.: Score of the Voluntary Disclosure Index Obtained by the Indian FSBs



Graph 4: Percentage increase in the Voluntary Disclosure Index Score Obtained by the Indian PSBs, PvtSBs and FSBs



Note: Researcher's Compilation

6.2 Results for examining the differences in voluntary disclosure practices among PSBs, PvtSBs and FSBs

An independent t-test was conducted on a sample of total 49 banks to examine whether there is any difference in voluntary disclosure scores among PSBs, PvtSBs and FSBs (categorical

variable). The results indicate that PSBs had statistically significantly lower disclosure practices than PvtSBs, as evidenced by their scores on the voluntary disclosure index. The mean value for PSBs is 53.6986, while for PvtSBs, it is 58.482 and for FSBs, the value derived is 59.097. The results are statistically significant, with a t-value of 2.965 and a p-value of 0.0035. When examining differences in practices across the two phases of the study, where the sample is divided into the periods 2015-16 to 2017-18 and 2020-21 to 2022-23, the t- statistics results also indicate a significant improvement in the implementation of these practices in Indian commercial banks. Results for two-sample t-test have been presented in Table 4 and 5.

Table 4: Two-sample T-test to check the Mean Variance of Voluntary Disclosure in PSBs, PvtSBs and FSBs

Group	Mean	Std error	Std dev.
PSBs	53.986	0.983	9.015
PvtSBs	58.482	1.019	9.004
FSBs	59.097	1.231	8.348
t-statistics	t-value= 2.965, p-value= 0.0035		

Note: Researcher’s Compilation

Table 5: Two-sample T-test to check the Mean Variance of Voluntary Disclosure in Two Phases

Group	Mean	Std error	Std dev.
Phase 1	51.486	0.960	8.647
Phase 2	63.026	0.600	5.403
t-statistics	t-value= -10.773, p-value= 0.000		

Note: Researcher’s Compilation

6.3 Summary statistics of the variables used in measuring the impact of voluntary disclosure practices on financial stability

Summary statistics for the variables used in the study are presented in Table 6. There is a total of 162 observations covering the six years specified in the study period. The disclosure index has an

average score of 54.641, indicating that Indian Public Sector Banks (PSBs) and Private Sector Banks (PvtSBs) achieved moderate to high-level practices in their voluntary disclosures. This value exhibits a small standard deviation (SD) of 3.605, with a maximum score of 74 and a minimum of 14 out of 83. The Z-score has a mean value of 10.970, with a maximum score of 30.545 and a minimum negative score of -3.730. A higher Z-score suggests that Indian banks were less prone to insolvency during the study period, indicating lower riskiness on average among the banks included in the study. As for the other dependent variable, the DD- score, a market-based stability measure, shows a negative mean score in the overall sample, with a standard deviation of 11.889 percent.

Table 6: Summary Statistics

Variables	Mean	Std. Dev.	Min	Max
TD	57.361	3.605	14	83
Z-score	10.970	29.941	-3.730	30.545
DD	-1.959	11.889	-17.335	9.506
ROA	0.455	1.160	-4.680	1.93
CAR	13.464	2.299	7.720	19.92
NPLs	3.186	3.594	0.150	16.69
SIZE	11.920	1.322	8.722	15.118
RIR	2.965	2.722	-1.98	5.46
GDPG	7.291	1.084	5.24	8.5

Source: Researcher’s Compilation

Among the independent variables, CAR indicates that banks have adequate capital, with a ratio of 13.46 percent. NPLs representing the ratio of non-performing loans to total loans, has an average value of 3.186. The real interest rate during this period has a mean value of 2.965 percent, and the GDP growth rate has shown a value of 7.291 percent during the study period.

Table 7: Pairwise Correlation Matrix

Variables	TD	Z-score	DD	ROA	CAR	NPLs	SIZE	RIR	GDPG
TD	1.000								
Z-score	0.127**	1.000							
DD	-0.083	0.062*	1.000						
ROA	-0.129	0.342***	0.220***	1.000					
CAR	0.009	0.191***	0.236***	0.652***	1.000				
NPLs	0.186	-0.279***	-0.161***	-0.807***	-0.573***	1.000			
SIZE	0.336***	0.002	0.050	-0.114	-0.027	0.290***	1.000		
RIR	-0.126*	0.232	0.200**	-0.134	-0.167**	0.342**	0.031	1.000	
GDPG	0.272***	0.011**	-0.270	0.254**	0.377**	-0.310***	0.140*	0.134*	1.000

Note: TD is the Disclosure Index, Z-score and DD are the financial stability measure, ROA=Return on assets, CAR=Capital adequacy ratio, NPLs= Ratio of non-performing loans to total loans, SIZE= Log of total assets, RIR= Real rate of interest, GDPG= Growth rate of GDP

Source: Researcher’s Compilation

The correlation matrix for the main variables used in the regression analysis is presented in Table 7. The pairwise correlation between the Z-score and Disclosure shows a positive significance with a coefficient value of 0.127. However, DD-score and disclosure variables do not exhibit any significant correlation and indicate a negative coefficient between them.

There is a statistically significant and positive correlation of ROA and CAR with the Z-score, as well as with the DD-score. NPLs are negatively and significantly correlated with both of the dependent variables used in the study. The SIZE of the firm matters for disclosure and is directly correlated with NPLs. This indicates that larger the firm’s size, the more disclosure practices would be adopted by the firm, and there are more chances of NPLs to be increased due to the larger size of the firm. However, both of these variables did not significantly correlate with the Z-score and DD-score.

Recognizing that multicollinearity might not always be detected solely by analyzing the

correlation matrix, an additional assessment through the variance inflation factor (VIF) was conducted, complementing the correlation values. The VIF serves as an indicator of how other independent variables impact the standard error of the regression coefficient. A VIF exceeding ten signifies the presence of collinearity concerns.

The analysis of variance inflation conducted on the variables utilized in this study shows that the highest VIF is 3.99 for the Z-score. Taking this into account, the correlation values in Table 8 demonstrate the absence of multicollinearity among the independent variables. This implies the potential inclusion of these variables within a unified regression model.

Table 8: Variance Inflation

Variables	TD	Z index	DD	ROA	CAR	NPLs	SIZE	Disclosure	RIR	GDPG
VIF	3.02	3.99	4.41	1.47	2.64	5.98	8.67	8.09	7.78	3.65
1/VIF	0.331	0.251	0.227	0.680	0.379	0.167	0.115	0.110	0.129	0.274

Notes: TD is the Disclosure Index, Z-score and DD are the financial stability measure, ROA=Return on assets, CAR=Capital adequacy ratio, NPLs= Ratio of non-performing loans to total loans, SIZE= Log of total assets, RIR= Real rate of interest, GDPG= Growth rate of GDP

Source: Researcher’s Compilation

6.4 Empirical Outcome: impact of voluntary disclosure practices on the financial stability

The study empirically evaluated the impact of disclosure practices on market- based and accounting-based stability. In this section, results obtained from the regression analysis are presented for the whole sample in Table 9. Additionally, separate results for public, private and foreign sector banks are provided in Table 10. The results of the Multiple Linear regression analysis are presented in both tables, showing the coefficient values and statistical significance of the particular variables used in the study. R-Square (R-sq), representing the proportion of variance explained by the independent variable for the dependent variable, is also presented in the tables. Furthermore, the value of the parametric statistical measure, i.e., Wald Chi2, is provided, indicating how collectively and individually significant the independent variables used

in the study are for the model.

Model 1 depicts that disclosure has been positively and significantly regressed with the Z-score, with a coefficient value of 2.804 and statistical significance at the 1 percent level. Among the control variables, ROA, CAR, and both macroeconomic variables have shown a positive and significant association with the Z-score, while Size and NPLs do not show any significant impact on the Z-score. R-sq in this model indicates that these variables have an explanatory power of more than 80 percent, and Wald Chi2 also confirms the model's fitness.

Table 9: Impact of Voluntary Disclosure Practices on the Accounting-based (Z- score) and Market-based (DD-score) Financial Stability for the Whole Sample (Multiple Regression Analysis)

Variables	DV: Z-score (Model 1)		DV: DD (Model 2)	
	Coeff.	Z (Sig)	Coeff.	Z (Sig)
TD	2.804	2.38***	-0.091	-0.67
ROA	9.709	2.71***	1.458	0.98**
CAR	1.728	-1.27**	0.887	1.60***
NPLs	-0.157	-0.13	0.276	0.55
SIZE	-0.076	-0.04	0.813	0.99
RIR	1.525	-1.24**	-0.353	-0.69***
GDPG	0.113	-0.05*	0.284	-0.32**
Cons.	-7.343	-0.23	-17.053	-1.30
R-sq.	0.83	0.00***	0.54	0.00***
Wald Chi2	25.71, Prob> chi2= 0.0006		13, Prob> chi2= 0.0277	
<i>Notes: TD is the Disclosure Index, Z-score and DD are the financial stability measure, ROA=Return on assets, CAR=Capital adequacy ratio, NPLs= Ratio of non-performing loans to total loans, SIZE= Log of total assets, RIR= Real rate of interest, GDPG= Growth rate of GDP</i>				

Source: Researcher's Compilation

In Model 2, the findings are not statistically significant for the impact of disclosure on market-

based financial stability. However, the controls have shown a positive and significant impact, such as ROA and CAR. The remaining variables do not demonstrate any association with the DD-score. For the macroeconomic variables, RIR has depicted a negative and significant impact, whereas GDPG, positively and significantly influences stability (DD-score). Output has also favored the model's fitness and variance explanation.

Results for the diversified sample show that in all categories of Indian commercial banks, voluntary disclosure practices have a positive and significant impact on the Z-score (Models 3 and 5). However, the results obtained for the DD- score do not show any significant outcomes for the disclosure-stability relationship (Models 4, 6 and 8). In Model 3, considering the controlling factors used in the study, findings have shown that except for NPLs and SIZE, all the remaining factors have a positive impact on the Z-score in the case of the PvtSBs. In Model 4, results depict that SIZE and ROA have a positive impact, while NPLs have a negative and statistically significant impact on the DD-score in the case of the PSBs. Other controlling factors do not claim any positive or significant relationship with financial stability.

Model 5, depicting the variables' impact on the Z-score in PvtSBs, have found that except for NPLs, RIR, and SIZE, all the remaining controlling factors have a positive and significant impact on accounting-based financial stability. A negative association with SIZE suggests that the firm's size in terms of total assets does not matter for its financial stability in PvtSBs, which is different from the results for the PSBs. Finally, in Model 6, the results for the controlling factors are much similar to those in Model 4, claiming that the scenario is the same in both categories of banks when considering the impact of these factors on the DD-score.

Considering the impact of disclosure of FSBs on financial stability, results have shown that TD, ROA, CAR and SIZE have a positive impact on accounting based financial stability (Model 7). While there are only two variables that found positively related with the market-based financial stability (Model 8).

Based on the regression output, findings support the view that Indian PSBs, PvtSBs and FSBs have been financially stable when considering accounting-based stability. However, there is not a strong relationship between voluntary disclosure practices and market-based stability measures, i.e., DD-score. Moreover, among the controlling factors, CAR and ROA have depicted a significant association in all the above-mentioned models. Among the macroeconomic variables, GDPG has shown a positive impact, while RIR does not claim any positive and significant impact on the stability measures except in the case of FSBs.

Table 10: Regression Output: Impact of Voluntary Disclosure Practices on the Financial Stability (Diversified Sample)

Variables	PSBs				PvtSBs				FSBs			
	DV: Z-score (Model 3)		DV: DD (Model 4)		DV: Z-score (Model 5)		DV: DD (Model 6)		DV: Z-score (Model 7)		DV: DD (Model 8)	
	Coeff.	Z (Sig)	Coeff.	Z (Sig)	Coeff.	Z (Sig)	Coeff.	Z (Sig)	Coeff.	Z (Sig)	Coeff.	Z (Sig)
TD	0.160	1.63***	-0.040	-0.76	0.981	1.30**	0.011	0.04	0.654	2.80**	1.301	1.94
ROA	1.393	1.78***	0.984	-2.19***	18.992	2.04***	4.598	1.18**	8.396	1.04***	5.358	1.09**
CAR	1.097	1.82***	0.408	1.21	6.416	-2.47***	0.992	0.93***	5.576	-3.67***	1.192	0.43***
NPLs	0.080	0.28	-0.256	-1.55**	-2.480	-0.55	-1.182	-0.62	-1.546	-2.58	-1.342	-1.42
SIZE	-1.272	-1.15	1.026	1.93***	6.564	1.28	-1.089	-0.53	2.574	3.78***	-2.049	-0.33

RIR	-1.275	-3.64***	-0.385	-1.96***	-3.950	-1.69**	-0.087	-0.09	4.550	-2.79**	-0.386	-1.79
GDPG	0.108	0.22***	0.296	-1.00**	0.029	0.01***	0.252	0.14	1.420	1.00***	1.362	1.43
Cons.	0.507	0.04***	-13.078	-1.82***	-18.888	-0.35	-9.013	-0.41	-28.450	-1.35	-10.014	-1.31
R-sq.	0.602		0.570		0.706		0.502		0.687		0.642	
Wald Chi2	104.14, Prob> chi2= 0.000		31.94, Prob> chi2= 0.000		20.53, Prob> chi2= 0.004		13.72, Prob> chi2= 0.005		80.53, Prob> chi2= 0.003		24.72, Prob> chi2= 0.001	
<p><i>Notes: Regression coefficient and p-value with the significance are provided in the table. ***, **, * denote the significance level at 0.01 level, 0.05 level and at 0.10 level respectively. The coefficient values were reducing to 3 digits for simplicity in understanding.</i></p>												

Source: Researcher's Compilation

7. Discussion

The study concludes that when disclosing voluntary information, the mean score is 56 out of the total score of 83. This score indicates a significant improvement in disclosing voluntary information in Indian banks' annual reports. An earlier study from 2008, based on data from Indian banking firms listed on the stock exchange, found the average score of voluntary disclosure to be about 25 (Hossain, 2008). Therefore, there has been a notable improvement in disclosing voluntary information. Hypothesis H1 is accepted, as per the t-test, which indicates significant differences in voluntary disclosure practices among Indian Public Sector Banks (PSBs), Private Sector Banks (PvtSBs) and Foreign Sector Banks (FSBs) during this period. Additionally, the study finds a significant enhancement in voluntary disclosure practices when the study period is divided into two samples. Thus, the Indian banking system is progressing in adopting voluntary disclosure practices in their annual reports. Hypothesis H2 is accepted, stating that there is a statistically significant improvement in voluntary disclosure practices among Indian commercial banking institutions during the study period.

Based on the regression output in Table 9, the empirical testing derived from the regression analysis shows the association between voluntary disclosure practices and the financial stability of the firm. However, the findings suggest an insignificant impact of voluntary disclosure practices on market-based stability. Thus, Hypothesis H3 has been accepted, claiming that Indian banks are more stable while using and reporting these practices. However, this stability is not reflected in market-based stability, and thereby Hypothesis H4 has not been accepted according to the results.

These findings differ from earlier Indian studies such as Sharma and Rastogi (2021) and Mahajan and Singh (2022), which claimed that discretionary disclosure is a wasteful activity that does not improve the efficiency of Indian institutions. Similar to the findings of Al-Homaidi *et al.* (2020), who claimed that voluntary disclosure enhanced the profitability of Yemen banks. The results are also in line with the previous study by Panchasara and Bharadia (2013), which showed that disclosures are positively and significantly associated with the financial performance of Indian banks.

Overall, the results indicate that the information willingly provided in banks' annual reports serves as a valuable resource for aiding investors in making informed investment choices and gaining insights into associated risks.

8. Implication and Conclusion

The present chapter of this study highlights the extent of voluntary disclosure practices and their relation to Indian firms' financial stability. Using a voluntary disclosure index containing a total

of 83 financial and non-financial items, the study evaluates that during the first and second phases, there is a significant improvement in the extent of these practices in banks. Additionally, the study finds that these practices significantly differ, with FSBs and PvtSBs being more concerned with adopting these practices than PSBs. Subsequently, the study investigates the impact of these practices on financial stability using both accounting and market-based stability measures. Based on the regression outputs, the findings claim that voluntary disclosure practices have a positive and substantial impact on stability. However, the results differ when measuring the impact on market-based stability, which does not show any significant impact. Overall, the findings suggest that the level of voluntary information disclosure is enlightening among Indian commercial banks, and this is also a favorable sign for the financial strength of the banks.

The study have powerful implications for investors and public in general for information purpose. Alongwith this, theorist and researchers could have insights in further examination of these types of practices in Indian financial and non-financial institutions. As a direction of future research this study invites the scope of further research that might include the qualitative other qualitative aspects of information with a broader analysis.

Declaration

We declare that the manuscript is original and has not been published before and is not currently being considered for publication elsewhere. We know of no conflicts of interest associated with publication and confirm that the manuscript is read and approved for submission by all named authors.

References

- Aggarwal, K. (2023). Factors influencing human resource disclosure index by Indian companies. *International Journal of Business and Emerging Markets*, 15(4), 396-427.
- Aikaeli, J., & Rashid, Z. (2015). Relationship between profitability and voluntary disclosure: A case of banks in Kenya. Available at SSRN 2706027.
- Akerlof, G. A. (1970), 'The Market for —Lemons: Quality Uncertainty and the Market Mechanism', *Quarterly Journal of Economics*, 84(3),488-500.
- Akhtaruddin, M. A. (2005). Corporate Mandatory Disclosure Practices in Bangladesh. *International Journal of Accounting*, 40(4), 399-422.
- Al-Homaidi, E. A., Tabash, M. I., & Ahmad, A. (2020). The profitability of islamic banks and voluntary disclosure: empirical insights from Yemen. *Cogent Economics & Finance*, 8(1), 1778406.

- Asthana, A., & Dutt, M. L. (2013). The extent of disclosure code of corporate governance in India: a comparative study of public and private sector banks. *Global Journal of Management and Business Studies*, 3(2), 111-118.
- Baumann, U., & Nier, E. (2003). Market discipline and financial stability: some empirical evidence. *Financial Stability Review*, 14, 134-141.
- Bernanke, B., & Gertler, M. (1990). Financial fragility and economic performance. *The Quarterly Journal of Economics*, 105(1), 87-114.
- Boot, A. W., & Schmeits, A. (2000). Market Discipline and Incentive Problems in Conglomerate Firms with Applications to Banking. *Journal of Financial Intermediation*, 9(3), 240-273.
- Charumathi, B., & Ramesh, L. (2015). On the determinants of voluntary disclosure by Indian companies. *Asia-Pacific Journal of Management Research and Innovation*, 11(2), 108-116.
- Chow, C. W., & Wong-Boren, A. (1987). Voluntary financial disclosure by Mexican corporations. *Accounting review*, 533-541.
- Calomiris, C. W. & Mason, J. R. (1997). Contagion and bank failures during the great depression: the June 1932 Chicago banking panic. *American Economic Review*, 87(5), 863-883.
- Cooke T. E. (1992). The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese listed corporations. *Accounting and Business Research*. 22(87), 229-237.
- Cordella, T., & Yeyati, E. L. (1998). Public Disclosure and Bank Failures. *Staff Papers - International Monetary Fund*, 45(1), 110.
- Diamond, D. W. (1985). Optimal Release of Information by Firms. *Journal of Finance*, 40(4), 1071-1094.
- Diamond, D. W., & Dybvig, P. H. (1983). Bank Runs, Deposit Insurance, and Liquidity. *Journal of Political Economy*, 91(3), 401-419.
- Frankel, R., McNichols, M., & Wilson, G. P. (1995). Discretionary disclosure and external financing. *Accounting Review*, 70(1), 135-150.
- Frolov, M. (2007). Why do we need mandated rules of public disclosure for banks? *Journal of Banking Regulation*, 8(2), 177-191.

- Glaum, M., Schmidt, P., Street, D. L., & Vogel, S. (2013). Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: company-and country-level determinants. *Accounting and business research*, 43(3), 163-204.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, 8(2), 47-77.
- Hasan, M. T., & Hosain, M. Z. (2015). Corporate mandatory and voluntary disclosure practices in Bangladesh: Evidence from listed companies of Dhaka Stock Exchange. *Research Journal of Finance and Accounting*, 6(12), 14-32.
- Hazaea, S. A., Tabash, M. I., Khatib, S. F., Zhu, J., & Al-Kuhali, A. A. (2020). The impact of internal audit quality on financial performance of Yemeni commercial banks: an empirical investigation. *The Journal of Asian Finance, Economics and Business*, 7(11), 867-875.
- Healy, P. M., Hutton, A. P., & Palepu, K. G. (1999). Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary accounting research*, 16(3), 485-520.
- Healy, P. M., Hutton, A., & Palepu, K. G. (1999). Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure. *Contemporary Accounting Research*, 16(3), 485-520.
- Healy, P., & Palepu, K., 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31(1-3), 405-440.
- Hoggarth, G, Reidhill, J., & P. Sinclair, (2003). Resolution of banking crises: a review. *Bank of England Financial Stability Review*: 109-123.
- Hossain, M. (2000). The disclosure of information in the annual reports of financial companies in developing countries: The case of Bangladesh. 206 f. 2000 (Doctoral dissertation, Thesis (Masters of Accounting and Finance)-The University of Manchester, United Kingdom).
- Hossain, M. (2001). The Disclosure of Information in the Annual Reports of Financial Companies in Developing Countries: the Case of Bangladesh. Unpublished MPhil thesis, The University of Manchester, UK.

- Hossain, M. (2008). The Extent of Disclosure in Annual Reports of Banking Companies: The Case of India. *European Journal of Scientific Research*, 23(4), 659-680.
- Hossain, M., Perera, M. H. B., & Rahman, A. R. (1995). Voluntary disclosure in the annual reports of New Zealand companies. *Journal of International Financial Management & Accounting*, 6(1), 69-87.
- Hossain, M., & Reaz, M. (2007). The determinants and characteristics of voluntary disclosure by Indian banking companies. *Corporate Social Responsibility and Environmental Management*, 14(5), 274-288.
- Hossain, M, Tan L. M., & Adams, M. (1994). Voluntary disclosure in an emerging capital market: Some empirical evidence from companies listed on Kuala Lumpur stock exchange. *International Journal of Accounting*, 29(4), 334-351.
- Hossain, M., & Taylor, P. J. (2007). The Empirical Evidence of the Voluntary Information Disclosure in the Annual Reports of Banking Companies: The Case of Bangladesh. *Corporate Ownership and Control*, 4(3), 111-125.
- Hutton, A. P. (2005). Determinants of managerial earnings guidance prior to regulation fair disclosure and bias in analysts' earnings forecasts. *Contemporary Accounting Research*, 22(4), 867-914.
- Kaufman, G. G. (1994). Bank contagion: A review of the theory and evidence. *Journal of Financial Services Research*, 8(2), 123-150.
- Keyur M. N., (2012). Case study: A study on Investor's Perception towards Corporate Reporting practices in India. *Advances in Management Accounting*, 5(7), 62-65.
- Khatib, S. F., & Nour, A. (2021). The impact of corporate governance on firm performance during the COVID-19 pandemic: Evidence from Malaysia. *Journal of Asian Finance, Economics and Business*, 8(2), 0943- 0952.
- Kunkel, J. G. (1982). Sufficient conditions for public information to have social value in a production and exchange economy. *The Journal of Finance*, 37(4), 1005-1013.
- Lang, M. H., & Lundholm, R. J. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of accounting research*, 31(2), 246-271.
- Lang, M. H., & Lundholm, R. J. (1996). Corporate disclosure policy and analyst behavior. *Accounting review*, 71(4), 467-492.

- Mahajan, P., & Singh, G. (2022). Voluntary Disclosure, Cost of Capital and Performance of Indian Commercial Banks. *Vision*, 09722629221081910.
- Meckling, W. H., & Jensen, M. C. (1976). Theory of the Firm. *Managerial behavior, agency costs and ownership structure*, 3(4), 305-360.
- Nathan, D., El-Moslemany, R., & El-Shreif, Y. (2021). The Impact of Voluntary Disclosure on Bank Profitability in The Egyptian Context. *Alexandria Journal of Accounting Research, First Issue*, 5.
- Nier, E. W. (2005). Bank stability and transparency. *Journal of Financial Stability*, 1(3), 342-354.
- Nier, E., & Baumann, U. (2006). Market discipline, disclosure and moral hazard in banking. *Journal of Financial Intermediation*, 15(3), 332-361.
- Panchasara, D. B. M., & Bharadia, M. H. S. (2013). Corporate Governance Disclosure Practices and Firm Performance: Evidence from Indian Banks. *Paradigm*, 17(1-2), 88-98.
- Podpiera, R. (2006). Does compliance with Basel Core Principles bring any measurable benefits? *IMF staff papers*, 53(2), 306-326.
- Sharma, A., & Rastogi, S. (2021). Impact of efficiency on voluntary disclosure of non-banking financial company—microfinance institutions in India. *Journal of Risk and Financial Management*, 14(7), 289.
- Skinner, D. J. (1994). Why firms voluntarily disclose bad news. *Journal of accounting research*, 32(1), 38-60.
- Spence, A. M. (1973). Labour market signalling. *Quarterly Journal of Economics*, 87(3), 355-74.
- Tadesse, S. (2006). The economic value of regulated disclosure: Evidence from the banking sector. *Journal of Accounting and Public Policy*, 25(1), 32-70.
- Tian, Y., & Chen, J. (2009). Concept of voluntary information disclosure and a review of relevant studies. *International Journal of Economics and Finance*, 1(2), 55-59.
- Titman, S., & Trueman, B. (1986). Information quality and the valuation of new issues. *Journal of accounting and economics*, 8(2), 159-172.
- Trueman, B. (1986). Why do managers voluntarily release earnings forecasts? *Journal of accounting and economics*, 8(1), 53-71.

Tsalavoutas, I., André, P. and Dionysiou, D. (2014) _Worldwide application of IFRS 3, IAS 38 and IAS 36, related disclosures, and determinants of non- compliance', Association of Chartered Certified Accountants (ACCA) Research Report (134), London.

Verrecchia, R. E. (2001). Essays on disclosure. *Journal of accounting and economics*, 32(1-3), 97-180.

Yadav, I., & Kumar, P. (2018). Voluntary Disclosure Practices of Selected Commercial Banks in India: A Comparative Study. *Pacific Business Review International*, 10(8), 21-32.