

EVIDENCE OF MARKET DISCIPLINE THROUGH OPERATIONAL RISK DISCLOSURES IN COMMERCIAL BANKING SECTOR OF PAKISTAN

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Abstract

The core purpose of this research is to explore the prevalence of market discipline among commercial banks through disclosing operational risk information. To measure the level of market discipline, content analysis of words containing disclosure of operational risk was conducted from annual financial reports of banks. The study finds that banks have grown understanding about or and its disclosures for a period from year 2006 to year 2014. Furthermore, the results show that mostly disclosures are voluntary and narrative, evidencing that market discipline is existent over study period. The results provide valuable implications for banks' risk policymakers to utilize or information for formulating risk management framework and also, supervisors may be benefited from enriched risk information available for developing robust supervisory and regulatory process.

Keywords: Market Discipline, Operational Risk, Risk Disclosures, Content Analysis.

JEL Classification: G210

Introduction

The primary objective of supervision of banking institutions is the identification of glitches that cause bank runs and failures. For this purpose, the supervisors seek information about likelihood of banks' failure, reviewing historical data through obligatory accounting and financial reporting and conducting on-site inspections. The effectiveness of market monitoring is ensured when investors are capable of making accurate assessment of a financial institution's condition, foresee volatilities and proactively counter to available information by reshaping decisions. This absolute aim of banks' supervision is achievable by supervisors and regulators more effectively, by using available information

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and market feedback which is building block of market discipline.

To achieve market discipline, Basel Accord II has recommended the banks to disclose risk information. The preamble for effectiveness of market discipline is a well-structured accounting, auditing and rating system. Resultantly, the investors may be in better position to accurately estimate banks' risk profiles and accordingly take precise investment decisions.

A bank's risk profile is a fusion of different non accounting and financial risks which also includes comparatively unique risk i.e, Operational Risk (OR). The fringe of OR is intergalactic and enormous. The term operational risk refers to risk of loss related to business disruption, system and technology failures, control failures, inefficient or failed procedures, processes and policies, intentional and un-intentional human errors, inefficient or inadequate human resources, internal frauds and external events. Operational risk also deals with legal risk, i.e, the risk of litigation proceedings by external parties and loss of reputation, which is reputational risk.

The risk disclosures are originated from BCBS report on enhancing bank transparency published in 1998. The report elaborates the significance of transparent financial markets established through disclosing risk information and banks' supervision using risk information accordingly. Market discipline entails accurate conclusion about risk profile, financial performance and condition and risk management stratagems of a bank. Nevertheless, it is a general notion that only those banks who disclose more and valuable risk information reap fruits of cost reduction due to better awareness and precision about bank's risk level among depositors and other stakeholders. BCBS (2005) recommended the banks that in the annual financial reports, banks should provide a generic explanation of their respective or exposures, ORM frameworks, policies, procedures and strategies for ORM, risk reporting nature and scope and operational risk hedging and measurement techniques.

It is the first study in Pakistan for tracing the presence of market discipline among banks, as recommended by pillar-III of Basel accord-II, to the best of our knowledge. Another major contribution of this study is its unique focus on main categories of OR on the recommendations of BCBS i.e, processes, people and systems for having insight about the awareness of OR disclosures. Furthermore, this study uses a novel approach of mapping the main categories of OR with sub categories to trace their disclosure patterns by banks. This research evaluates the role of OR for achieving and measuring market discipline level. This study adds a new dimension to literature which highlights market discipline as a tool for transparent financial system as recommended by BCBS, but through OR disclosures specifically.

Most of existing academic literature on risk disclosures and market discipline employs quantitative data and methodologies. However, this research utilizes qualitative methodology for having detailed insight and understanding of OR and market discipline. This study focuses on positive dimensions of market discipline i.e, enhanced market transparency and contributes to academic literature on

voluntary OR disclosures.

The next section 2 of this paper will discuss existing literature on OR disclosures and market discipline. The section 3 will highlight the methodology and design of this study. Section 4 will reflect upon the findings and discussion on the results of content analysis of disclosure words. Policy implications will be discussed in section 5 for banks' risk managers, supervisors and regulators.

Research Objectives

The following are main objectives and aims of this research:

1. To review the operational risk disclosures practices of commercial banks for identification of level of awareness about operational risk events.
2. To measure market discipline among commercial banks through operational risk disclosures.
3. To rank relative significance of sub categories of operational risk with reference to disclosure frequency.
4. To suggest implications for banks' risk policymakers, supervisors and regulators.

Market Discipline, Risk Disclosures And Operational Risk

This section is highlighting existing academic literature on market discipline, operational risk and risk disclosures.

Literature on Market Discipline

Market discipline phenomenon has been articulated by researchers in various different ways. It can be termed as regulatory apparatus for punishing the financial firms having inadequate risk management skills (De Mendonça & Loures, 2009). Bliss and Flannery (2002) elaborated that market discipline comprises of two components; first, market participants' ability to accurately evaluate financial condition of an organization i.e. market monitoring, and second, the market participants' ability to influence the organization's management for appropriate actions on the basis of monitoring i.e. influencing. Therefore, Forssbæk (2009) argued that market discipline may have direct and indirect dimensions. Theoretically, the investors and customers have direct influence on managements' decisions but, regulators and intermediaries have both indirect and direct influence (Eling, 2012).

The financial turmoil of 2008 has uncovered grave inefficiencies in the financial institutions' transparency of policies and risk management practices. Alarmingly, even in some giant and sophisticated financial institutions having good market reputation, risk was being poorly managed. Harrington (2005) stated that investors' role is crucial in market discipline where they alongwith bank customers pose demands to induce the banks to manage risks in effective manner.

Market Discipline through Risk disclosures

The most important ingredients of growth and stability of banking system are transparency and disclosures because enhanced risk disclosures dilute the likelihood of banking crisis (Haija et al., 2012). This is due to banks' risk aversive behavior i.e, due to operating in higher risks disclosure market, the banks opt to take lesser risks (Nier & Baumann, 2006), and the lesser the risks they take, the lesser would be the cost for banks in case of incurring losses.

It is important for the banks to ensure disclosure about their complete risk profile, risk appetite and risk assessment strategies in order to attain market discipline in true sense. It is worth to make sure that only the desired information is available in market because a key element of sound and consistent financial market is right amount of market information (Jaime Caruana, 2009). In turn, this will help the investors to incorporate accurate judgments in investment decisions, leading to high motivation for banks to operate prudently and improve risk management capabilities (Vauhkonen, 2012).

There is no second opinion about the ability of risk disclosures in developing strong financial markets and enabling investors to make informed investment decisions, besides ensuring prudential supervision and making banks more accountable in front of all stakeholders including supervisors and investors (Caruana, 2009).

Penas and Alkan (2010) argued that conflicts between management and shareholders can partly explain lack of market discipline, or more appropriately, between minority shareholders and major owners which may further get worse due to lack of supervision and regulatory reviews. They further stated that the publically traded banks were less vulnerable to failures implying that public banks wield more market discipline, when compared with private banks.

Operational Risk disclosures in banks

Operational risk in banks arises due to defecient, inadequate, failed or inefficient processes, human resources, systems or because of external events (BCBS, 1998). Operational Risk refers to the likelihood of loss due to inadequate or failed internal controls, errors of omission or commission by human resources, failures of system and technology, internal and external frauds and external events. Gârliște (2013) elaborated that operational risk management framework must include policies and strategies for timely identification, measurement, assessment and monitoring of operational risk, and it is banks' management core responsibility to employ optimum resources and to disclose operational risk. Operational risk literature mostly discusses the quality of OR disclosures, using quantitative methods (Grody et al., 2005; Mignola & Ugocioni, 2006, Nešlehová et al., 2006). An exception was noted in the study by De Fontnouvelle et al. (2004), who observed that banks create more capital charge for OR than that of other risks, because while measuring operational risk, publicly available

data is also used. This further highlights the importance of accurate measurement and clear understanding about dimensions of or disclosures, nonetheless, none of existing studies has used main categories and sub categories of operational risk to ascertain market discipline.

Operational risk has two forms, i.e, failure operational risk and strategic operational risk (Lore & Borodovsky, 2000). The former form of OR refers to operational risk arising from normal business activities, whereas the later relates to the environmental factors, like paradigm shifts in business models, competition, changes in regulatory guidelines and supervision, acts of nature, etc. which may cause operational risk to banks (GÂRLIŞTE, 2013).

Figure 1 is illustrating the forms of operational risk.

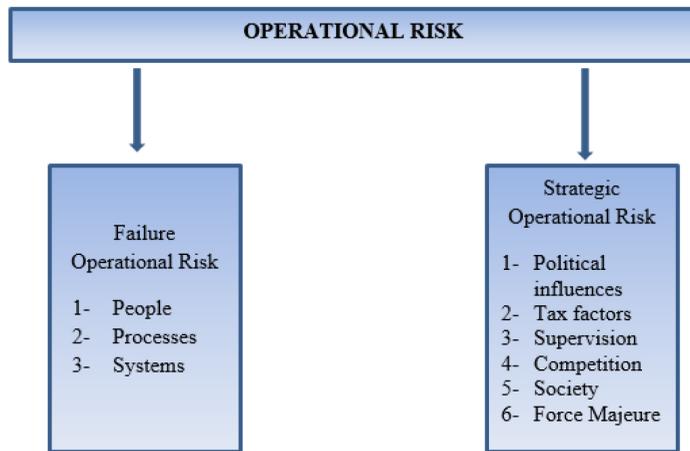


Figure 1: The forms of Operational Risk in banks

The market discipline pillar of Basel Accord II recommended the banks for conforming to mandatory and general disclosure requirements, for enhancing transparency among the banks and to attain market discipline. This pillar also suggested the general deliberations for appropriateness of nature, means, materiality and frequency of risk disclosures.

Market Discipline Among Banks In Pakistan

As discussed earlier, no specific literature is available on market discipline specifically through OR disclosures. Also, to our knowledge, no qualitative study investigates about market discipline through risk disclosures, exclusively focusing on operational risk. Our study moderately follows Oliveira et al. (2011) who used quantitative research design and established that, banks by

voluntarily disclosing their risk information ensure enhanced market discipline, enriched corporate image and better market reputation.

Research Design and Methodology

This study takes Pakistani commercial banking sector as population to ascertain their practices of OR disclosures, because Basel Accord-II is applicable to commercial banks only in constraining risk taking (Ojo, 2010). Therefore, 38 commercial banks operating in Pakistan (State Bank of Pakistan, 2014) are study population.

According to Masood and Fry (2012), out of 38 banks, 16 commercial banks are selected as these banks represent above 92% of banking assets and liabilities. Further, these 16 commercial banks have significant existence in banking industry as they have been positioned by SBP in the list of top 20 banks.

Annual reports of banks published during 2006 to 2014 were analysed for the collection of qualitative data for further analysis. As the OR disclosures were scattered throughout the entire financial reports, therefore, complete reports were studied and were included in analysis (Woods & Marginson, 2004).

Methodology

For measuring awareness about operational risk and level of OR disclosures among banks, content analysis of words was employed for analysing annual reports. The method of analysis of periodic financial and non-financial reports of banks was first introduced by Copeland and Fredericks (1968), who took into account the frequency of a particular topic i.e. how many times a certain word, phrase or topic was narrated or discussed. This method enables the analyst to measure disclosures and view disclosure practices and patterns of variation over time in the disclosure practices. Similarly, counting the frequency of disclosure words can be attributed as proxy of extent of disclosures and there is fair likelihood of change in disclosure practices over time, therefore annual reports of relatively long period were analyzed for gauging possible likelihood of any transformation in disclosures by banks.

Under the main categories of processes, people and systems, sub categories, developed with the help of operational risk categories of BCBS recommendations, Kravet and Muslu (2013), Miihkinen, A (2012), BIS (2005) and Lajili and Ze'ghal (2005), are mapped. For the purpose of this study, same operational risk categories are used excluding capital adequacy disclosures. For deriving robust and reliable results, 144 annual financial reports of banks were analysed, employing content analysis method of qualitative research, and relative frequencies of both positive and negative disclosure words was noted.

Table 2 is representing main categories of or, i.e processes, people and systems alongwith respective sub categories containing words used in quantifying the or disclosures to measure existence of market discipline.

Table 2

Main Category of or	Sub Categories of or	Disclosure Words
Processes	a. Internal frauds b. External frauds c. Outsourcing d. Effective implementation of operational risk identification, assessment and management systems e. Effective code of business practices f. Execution of laid down policies and internal controls for operational risk management. g. A well developed and implemented procedure of escalating operational risk issues to senior management and board level h. Regular periodical and surprise audits, including internal, external and supervisory audits	Audit, Compliance, External Fraud, Internal Control, Internal Fraud, KYC, Litigation / legal risk, Money Laundering, Outsourcing, Operational Risk, Prudential Regulations, Risk reporting, supervision.
People	a) Recruitment of experienced staff b) Retention and training of employees c) Appropriate compensation and development of employees d) Employment practices	Benevolent fund, Criminal, Education, Empowerment, Entertainment, Employee insurance, Family, Harassment, Health, Human, Mentoring/counseling, Motivation, Outsourcing, Pension Fund, Punishment, Professionalism, retirement benefits, Recruitment, Training, workplace Safety.

(Table Continued...)

	e) Workplace safety f) Implementation of code of conduct and ethics	
SYSTEMS	a. Damage to physical assets b. Business continuity and disaster recovery plans c. Delivery and processes management d. Procuring insurance e. System failures f. Introducing new technologies g. Maintenance and upgrade of existing technologies h. Investments in information security systems	Automation, Breakdown, Business Continuity plan, catastrophe, connection/ connectivity, Communication, Computers, Cyber, Quality Control, Damages, Disaster, Disaster Recovery, Execution and delivery, Electrical, hardware, innovation, Infrastructure, information security, information technology, installation, software, transmission, technical, upgrade, Web.

Results of Content Analysis and Discussion

The findings of content analysis showed that on average the banks disclosed 1,693 risk words during 2006-2014 in their annual reports, aggregating to 27,093 words about three categories of OR, i.e, processes, people and systems. In general over study period, banks seemed motivated for disclosing more of operational risk information, possibly due to two causes; either more awareness about OR has been evolved, or the banks have grown motivation towards following market discipline and to meet regulatory standards.

Table 3 is presenting a brief summary of results of content analysis;

Table 3

Total Disclosures words	27,093
Disclosures about processes	5,117
Disclosures about people	12,095
Disclosures about systems	9,881
Mean Disclosures	1,693

The results directed that banks disclosed most of information about human resources i.e, under main category of people. About 45% of words disclosed were about people, whereas, the processes were least disclosed, which could make only 18% of the total disclosed OR words. This shows banks' responsible behavior for their human resources, employment practices and employee welfare. Nevertheless, it unfolds that the banks are not sagacious about the significance of processes-for successful execution of desired operational plans and OR embedded in inefficient processes planning and execution. Nonetheless, now the financial markets being highly competitive and efficient, the banks who capture more market share, understand the significance of well-established processes and have greater aspiration for making general public aware about their processes and inherent operational risk to attract mature investors. But, it seems that banks in Pakistan are yet to grasp the sage of employing efficient processes.

The results highlight the increasing trend of operational risk disclosures by banks from year 2006-2013. A possible reason may be the banks' managements who have learned know how and enriched awareness about OR events, their identification, assessment techniques and effective management of OR.

Table 3 shows the year wise OPRD by the banks.

Table 3

Period	<i>Operational Risk Disclosures (OPRD)</i> <i>No. of words</i>
2006	828
2007	1311
2008	2329
2009	3222
2010	3575
2011	3764
2012	3713
2013	4163
2014	3813
<i>Table 4.2</i>	

Figure 2 is showing that during year 2006-2013, the significance of OR disclosures and market discipline has been growingly emerged among banks. However in year 2014, the OR disclosures have slightly declined. This is mainly due to supervision and regulatory issue during 2014. Though SBP has circulated various regulatory directives for implementation of Basel Accords-II and III, however, only one policy circular for implementation of operational risk and disclosure of risk

information was issued by SBP. Furthermore, no separate policy directives and guidelines were circulated by SBP for banks to disclose risk information and follow pillar-III of market discipline. Therefore, ostensibly, the commercial banks were not motivated, regulated and supervised in such a way to disclose more of risk information and follow market discipline.

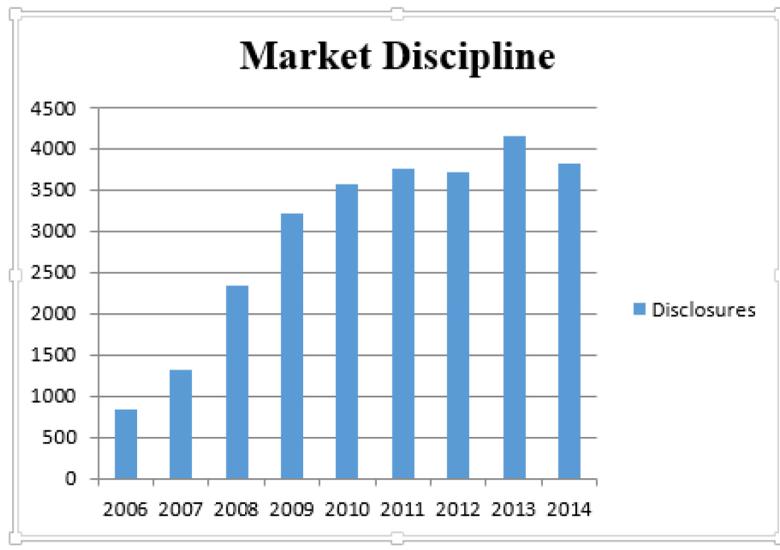


Figure 2

The disclosure behavior was found interesting on individual bank level. MCB emerged as leader in disclosure of operational risk events having 6458 OR words disclosed. It tantamount that 24% of total OR disclosures were done by MCB. Other bigger banks with same market presence, share and network size, including NBP, ABL, HBL, UBL etc. were way behind in disclosing or information. MCB was followed by ABL disclosing 2851 OR words. The banks with lesser market share and smaller network size seemed less motivated for attaining market discipline and disclosed least OR information. Table 4 is highlighting bank-wise OR disclosures during study period.

Table 4

Bank	OPRD
National Bank	1249
UBL Bank	2212
ABL Bank	2851
HBL Bank	1736
Bank of Punjab	971
Summit Bank	857
MCB Bank	6458
Standard Chartered Bank	1572
Askari Bank	1826
NIB Bank	1724
Soneri Bank	755
Faysal Bank	432
Silk Bank	762
Alfalah Bank	211
Bank Al-Habib	873
Habib Metropolitan Bank	839

Figure 3 is showing bank wise OR disclosures in graphic form.

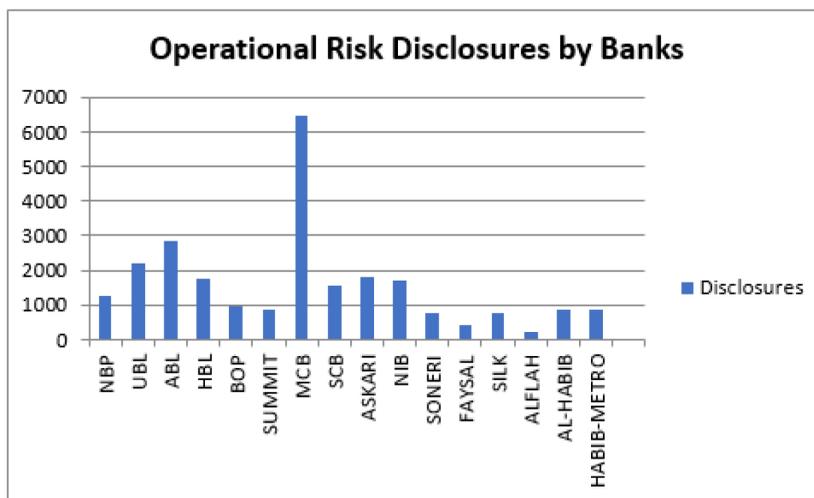


Figure 3

From figure 3, a surprising finding is apparent that OR disclosures by many banks are on the average side throughout the study period regardless of banks' size, network, market share, deposit base and earnings.

Conclusion and Policy Implications

The findings of this research manifest that operational risk disclosures by most of banks in Pakistan are largely voluntary and random in nature. It implies that banks are following market discipline, however, this is in the form of stereotype disclosure of risk information in annual financial reports. The banks' board of directors and risk management policymakers are not yet able to sage connotation of processes and systems aspects of operational risk.

By recommending the pillar-III of market discipline, purpose of BCBS was to encourage transparent environs for market participants besides formulating an effective risk disclosure mechanism for banks. The results of study support that banks in Pakistan are not propagating useful risk information in the market and only human resources and employment practices related information is disseminated. Such information disclosure is hardly worthwhile for making investment decisions and during supervisory reviews by regulators, jeopardizing the core essence of market discipline.

In the light of study outcomes, four precise recommendations can be derived. First, for both investors and supervisors, it is high time for banks to shift to contingent reporting for fulfilling regulatory requirements and to render clear picture of risk for investors. This implies that banks should report and escalate potential losses before occurrence, when such potential losses may be sensibly estimated using historical data of risk events. The disclosures of potential losses and near losses will enable the investors and supervisors decide about what kind of investment decisions and regulatory actions can be taken keeping in view available risk information.

Secondly, over confidence and behavioral biases on part of banks lead to information imperfections, which depicts the manner, the banks respond to new information. It necessitates that banks' risk policy makers and supervisors develop a uniform framework of risk disclosures and gather data of market response to emerging information, so that in catastrophic situations like crisis, market situation may not get worst by over reacting to new information. This will help investors to downgrade associated confidence for establishing accurate assessment and making appropriate decisions accordingly.

Third, the supervisors should encourage instituting an independent bank risks disclosure council comprising of representatives of regulators, banks and investors, for determining minimum standard for risk disclosures. This council should also formulate benchmarks for performance measures for making distinction between individual bank's risks for determining liability structures, potential financial risks and likelihood of distress and pricing systematic beta risk. Furthermore, the council may suggest irregular supervisory reviews like routine tests for assessing banks' operational

risk exposure.

Fourth, the supervisors must utilize the information disclosures in periodic accounts and annual reports while formulating regulations or regulatory actions for a financial institution. This will not only enhance market discipline, but will also reduce cost of supervision, as increased response and feedback from market would be a natural supplement for bank supervision. Due to technology disruptions and resultant complexity and sophistication of banking business models, regulators are now increasingly relying on market signals disseminated through risk information disclosures. In developed countries, where regulators are using a combination of market and other sources of information for regulating banks, it is manifested that supervisors are in better position to identify potential adverse events which may affect financial markets and take corrective actions preemptively.

Limitations of Study

For the purpose of this research, annual financial reports of commercial banks have been used to measure OR disclosures, although, banks may disseminate risk information through interim financial reports, newsletters, magazines etc. as well, which may also be utilized for measurement of market discipline.

Also, scope of study does not include banks' motivation and behavioral aspects for disclosing operational risk information and following market discipline practices are not studied which may be an interesting phenomenon to explore in future research. Furthermore, the share of operational risk disclosures in overall market discipline behavior of banks is beyond scope of this study.

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