Implementation of Operational Risk Regime: A Case of Commercial Banks in Pakistan

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Chapter 1: Introduction

(1.1) Operational risk:

Operation Risk in one of the latest discovery in the subject of risk management. Within a very short period of time it gained immense popularity. The reason behind this is the impact it has on the profitability of financial Institutions. Now days Operational Risk is one of the most debatable issues in the Risk Management. The only problem with Operational risk is that there is no hard and fast rule to measure operational risk. It is partly because every Institution has more or less different operating environment. Which means that operational risk faced by financial institution is different from every financial institute? Operational risk includes both internal and external risk: the "Internal risk" is known as failure risk and the external risk is known as "Strategic risk".

1.2) Forms of Operational:

- External Risk
- Internal Risk

1.2.1) External Risk:

- Political
- Taxation
- Regulation
- Societal
- Competition

1.2.2) Internal Risk:

- People
- Process
- Technology
- Others

Although the definitions of market risk and credit risk are relatively clear, the definition of operational risk has evolved rapidly over the past few years. At first, it was commonly defined as every type of unquantifiable risk faced by a bank.

Operational risk has been defined in number of ways and some common definitions of operational risk are as follows:

- The risk of monetary losses resulting from inadequate or failed internal processes, people, and systems or from external events.
- Risk that external events or deficiencies in internal controls or information systems will result in an economic loss-whether the loss is anticipated to some extent or entirely unexpected.
- The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.
- Operational risk refers to the risk that an error or stoppage in operations could lead to economic loss or reduced credibility.
- The risk a financial institution faces from computer hardware or software failure, natural disaster, terrorist attacks, and the like
- Any risk that is not market risk or credit risk related. This includes the risk of loss from events related to technology and infrastructure failure, from business interruptions, from staff related problems and from external events such as regulatory changes.
- While identifying the operational risk we should carefully understand the interrelatedness of certain risk that is there are some risks

1.3) Objectives:

- What are the factors, which are becoming hurdles in the efficient implementation and management of operational risk?
- Does the control on such factors result in the progress of operational risk management in the commercial banks?
- Does the identification of such unrevealed factors will help the commercial banks in future to efficiently implement the new versions of operational risk as prescribed by the central bank that is State Bank of Pakistan.
- Categorization of Loss events.

1.4) Justification:

Reasons:

- BASEL 2 was not implemented according to the deadlines provided in the State Bank of Pakistan's road map to BASEL 2. Operational risk is also one of the components of BASEL 2. Therefore, the study will be performed to analyze where the commercial banks are standing in the implementation and management of operational risk.
- Another reason is that the new version of BASEL that is BASEL 2.5 has come. Therefore, by analyzing the progress of operational risk's management under BASEL 2, central bank that is State Bank of Pakistan can design such a road map for the implementation of BASEL 2.5, which will be feasible for commercial banks in terms of meeting the deadlines.

Stakeholders:

- State Bank of Pakistan
- Commercial Banks

Benefits of the Stakeholders:

State Bank of Pakistan:

- They will come to know that after the delay in implementation of BASEL 2, whether the commercial banks have done some extra effort to implement the operational risk efficiently or not.
- Another benefit is that State Bank of Pakistan can design their new road map for the implementation of BASEL 2.5 in such a way that commercial banks can accomplish the required objectives on time. Therefore, the mistake of late implementation of BASEL 2 cannot be repeated again.

Commercial Banks:

- This study will give chance to commercial banks to share the accomplishments and hurdles, which they have faced in managing the operational risk under BASEL 2.

- This study will also help commercial banks to provide the reasons due to which the delay occurred in the implementation of operational risk under BASEL 2 so that next time State Bank of Pakistan can provide time deadlines for the implementation of any policy.

1.5) Limitations:

Basel 2 is consists of three major components:-

- Credit Risk
- Operational Risk
- Liquidity Risk

However, this study covers only the analysis about the implementation and management of operational risks under BASEL 2 by local commercial banks.

- The study will not cover the issues related to operational risk's implementation in other countries because the study is conducted only in the banks, which are located in Karachi, and the focus is to highlight the progress, difficulties and accomplishments of banks working in Pakistan regarding the management of operational risk.

Reason:

BASEL 2 is a very vast field and is applied in various countries round the globe therefore; it is very difficult to analyze all the components of BASEL 2 worldwide in a short span of time.

1.6) Scope:

- The study will cover the management and progress of operational risk by local commercial banks as prescribed under the guidelines of BASEL 2.
- The study can be generalized within the boundaries of Pakistan and can only be restricted to the local commercial banks because the data will be collected only from the Pakistani based commercial banks, which are operating in Karachi and have branches all over the

country. Therefore, it is not possible to provide an insight about the progress of foreign banks regarding the operational risk

1.7) Assumptions:

- The banks faced difficulties to implement the operational risk as guided in the BASEL 2.
- It will be beneficial for the State Bank of Pakistan to know about the progress, which the banks have made towards the implementation of operational risk so that when next time SBP is going to frame any policy for the commercial banks they will be having good insights about the potential of commercial banks to implement that policy.
- Progress towards the implementation of operational risk can also indicate about the bank's effort towards the implementation of other components of BASEL 2.

1.8) Operational Risk

1.8.1) Background and Overview:

The Committee is proposing to encompass explicitly risks other than credit and market in the New Basel Capital Accord. This proposal reflects the Committee's interest in making the New Basel Capital Accord more risk sensitive and the realization that risks other than credit and market can be substantial. Further, developing banking practices such as securitization, outsourcing, specialized processing operations and reliance on rapidly evolving technology and complex financial products and strategies suggest that these other risks are increasingly important factors to be reflected in credible capital assessments by both supervisors and banks.
Under the 1988 Accord, the Committee recognizes that the capital buffer related to credit risk implicitly covers other risks. The broad brush approach in the 1988 Accord delivered an overall cushion of capital for both the measured risks (credit and market) and other (unmeasured) banking risks. To the extent that the new requirements for measured risks are a closer approximation to the actual level of those risks (as a result of the proposed changes to the credit risk calculation) less of a buffer will exist for other risks. It should also be noted that banks

themselves typically hold capital well in excess of the current regulatory minimum and that some are already allocating economic capital for other risks.

1.8.2) Capital Framework Overview:

The Committee believes that a capital charge for other risks should include a range of approaches to accommodate the variations in industry risk measurement and management practices. Through extensive industry discussions, the Committee has learned that measurement techniques for operational risk, a subset of other risks, remain in an early development stage at most institutions, but are advancing. As additional aspects of other risks remain very difficult to measure, the Committee is focusing the capital charge on operational risk and offering a range of approaches for assessing capital against this risk.

The Committee's goal is to develop methodologies that increasingly reflect an individual bank's particular risk profile. The simplest approach, the Basic Indicator Approach, links the capital charge for operational risk to a single risk indicator (e.g. gross income) for the whole bank. The Standardized Approach is a more complex variant of the Basic Indicator Approach that uses a combination of financial indicators and institutional business lines to determine the capital charge. Both approaches are pre-determined by regulators. The Internal Measurement Approach strives to incorporate, within a supervisory-specified framework, an individual bank's internal loss data into the calculation of its required capital. Like the Standardized Approach, the Internal Measurement Approach demands a decomposition of the bank's activities into specified business lines. However, the Internal Measurement Approach allows the capital charge to be driven by banks. own operational loss experiences, within a supervisory assessment framework. In the future, a Loss Distribution Approach, in which the bank specifies its own loss distributions, business lines and risk types, may be available.

1.8.3) Definition of Operational Risk

The Committee wants to enhance operational risk assessment efforts by encouraging the industry to develop methodologies and collect data related to managing operational risk. Consequently, the scope of the framework presented in this paper focuses primarily upon the operational risk component of other risks and encourages the industry to further develop techniques for measuring, monitoring and mitigating operational risk. In framing the current proposals, the Committee has adopted a common industry definition of operational risk, namely: the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events". Strategic and reputation risk is not included in this definition for the purpose of a minimum regulatory operational risk capital charge.

1.8.4) Direct vs. Indirect Losses:

As stated in its definition of operational risk, the Committee intends for the capital framework to shield institutions from both direct *and* certain indirect losses. At this stage, the Committee is unable to prescribe finally the scope of the charge in this respect.3 However, it is intended that the costs to fix an operational risk problem, payments to third parties and write downs generally would be included in calculating the loss incurred from the operational risk event. Furthermore, there may be other types of losses or events which should be reflected in the charge, such as near misses, latent losses or contingent losses. Further analysis is needed on whether and how to address these events/losses. The costs of improvement in controls, preventative action and quality assurance, and investment in new systems would not be included. In practice, such distinctions are difficult as there is often a high degree of ambiguity inherent in the process of categorizing losses and costs, which may result in omission or double counting problems.

1.8.5) Expected vs. Unexpected Losses (EL/UL):

In line with other banking risks, conceptually a capital charge for operational risk should cover unexpected losses due to operational risk. Provisions should cover expected losses. However,

accounting rules in many countries do not appear to allow a robust, comprehensive and clear approach to setting provisions, especially for operational risk. Rather, these rules appear to allow for provisions only for future obligations related to events that have already occurred. In particular, accounting standards generally require measurable estimation tests be met and losses be probable before provisions or contingencies are actually booked. In general, provisions set up under such accounting standards bear only a very small relation to the concept of expected operational losses. Regulators are interested in a more forward-looking concept of provisions.

1.9) Risk Quantification

1.9.1) Analytical Framework:

Industry has made a great progress in developing the models which can develop Quantify the operational risk. The supervisory Guidance on Operational Risk Advanced Measurement Approaches For Regulatory Capital says, "The analytical frameworks, which are a part of the overall operational risk framework, are based on various combinations of an institution's own operational loss experience, the industry's operational loss experience, the size and scope of the institution's activities, the quality of the institution's control environment, and management's expert judgment". (Supervisory Guidance on Operational Risk Advanced Measurement Approaches for Regulatory Capital).

1.9.2) Accounting for Dependence

- Supervisory Guidance on Operational Risk Advanced Measurement Approaches for Regulatory Capital says, "Management must document how it's chosen analytical framework accounts for dependence (e.g., correlation) between operational losses across and within business lines. The issue of dependence is closely related to the choice between a bottom-up or a top-down modeling approach. Under a bottom-up approach, explicit assumptions regarding cross-event dependence are required to estimate operational risk exposure at the firm-wide level".
- Under a top-down approach, an explicit assumption regarding dependence is not required. However, a parametric distribution for loss severity may be more difficult to

specify under the top-down approach, as it is a statistical mixture of (potentially) heterogeneous business line and event type distributions. Institutions must carefully consider the conditions necessary for the validity of top-down approaches, and whether these conditions are met in their particular circumstances.

1.9.3) Risk Mitigation:

- There are many ways to efficiently manage an operational risk, including risk transfer through risk mitigation products. The risk mitigation can become an essential factor in minimizing operational risk exposure in an institution. Adjustment is permitted which can directly affect the amount of regulatory capital that is held for operational risk. The adjustment is limited to 20% of the overall operational risk

1.9.4) Data Maintenance

- Data maintenance is a critical factor in an institution's operational risk framework. Institutions with advanced data management practices should be able to track operational risk loss events from initial discovery through final resolution. These institutions should also be able to make appropriate adjustments to the data and use the data to identify trends, track problem areas, and identify areas of future risk. Such data should include not only operational risk loss event information, but also information on risk assessments, which are factored into the operational risk exposure calculation. In general, institutions using the AMA should have the same data maintenance standards for operational risk as those set forth for A-IRB institutions under the credit risk guidance.

1.9.5) Testing and Verification:

- The operational risk framework should provide for regular and independent examination of operational risk management policies, processes and measurement systems, as well as operational risk data capture systems. In majority of the institutions examination of operational risk can be performed by the audit department of that organization. Internal

and external audits can provide an independent assessment of the quality and effectiveness of the control systems' design and performance.

- According to the Supervisory Guidance on Operational Risk Advanced Measurement Approaches For Regulatory Capital, "The verification of the operational risk measurement system should include the testing of:
- Key operational risk processes and systems;
- Data feeds and processes associated with the operational risk measurement system;
- Adjustments to empirical operational risk capital estimates, including operational risk exposure;
- Periodic certification of operational risk models used and their underlying assumptions; Assumptions underlying operational risk exposure, data decision models, and operational risk capital charge".

Chapter 2: Literature Review

2.1) Operational Risk

2.1.1) Definition:

- The operational risk explains that operational risk arises while performing the routine activities of the business. It includes fraud risks, legal risks, physical or environmental risks, etc. The risk management department of the financial institutions manages operational risk. These financial institutions manage the operational risk according to the guidelines given in the BASEL 2. (Operational Risk, October 2007, Wikipedia)
- More specifically, Basel II defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. (Operational Risk, October 2007, Wikipedia)

2.2) BASEL Committee's Definition:

- The BASEL Committee has realized that the term operational risk has variety of meanings therefore banks have given permission to adopt their own definitions of operational risk for internal purpose (Operational risk, October 2007, Wikipedia).
- The article explains that The BASEL Committee defines operational risk as:

"The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events" (Operational Risk, October 2007, Wikipedia). More risk sensitive and other risks are also important.

- BASEL committee is now considering to incorporate the risks other than credit and market risk in the new accords of BASEL. This approach of BASEL committee suggests that committee is becoming more sensitive and it also highlights that other risks are also getting importance as the time passes (Consultative Document of Operational Risk for Banking Supervision, May 2001).

2.3) Risk Management

The management of operational, credit and market risks follows as sequence of logical steps:

- Identification
- Assessment
- Monitoring
- Mitigation (Cornett & Saunders, Financial Institution's Management, Mc Graw Hill, 2007)

2.4) Identifying Operational Risk:

- Basel Committee's definition of operational risk is becoming industry standard. But the definition of operational risk excludes the business risk. But includes external events such as external frauds, security breaches, regulatory effects or Natural disasters it includes legal risk which arises when a transaction proves unenforceable in law but excludes strategic and reputation risk (Consultative Document of Operational Risk for Banking Supervision, May 2001).

2.5) Operational Risk Assessment:

Basel II and various Supervisory bodies of the countries have prescribed various soundness standards for Operational Risk Management for Banks and similar Financial Institutions. To complement these standards, Basel II has given guidance to 3 broad methods of Capital calculation for Operational Risk. To Measure the operational risk we have two approaches the top down approach and bottom up approaches (Cornett & Saunders, Financial Institution's Management, Mc Graw Hill, 2007)

2.5.1) Top down Model

This model attempt to measure operational risk at the broadest level that is using firm wide or industry wide data. The results are used to determine the amount of capital that needs to be set aside as a buffer against operational risk. This capital is allocated to business units.

- **Basic Indicator Approach** - Based on annual revenue of the Financial Institution. For Example 20% of Gross Income.
- **Standardized Approach -** Based on annual revenue of each of the broad business lines of the Financial Institution
- **Advanced Measurement Approaches** - Based on the internally developed risk measurement framework of the bank adhering to the standards prescribed (Dun & Bradstreet, Financial Risk Management, Tata McGraw-Hill)

2.5.2) Bottom-Up Model

This model start at the individual business unit or process level the result are then aggregated to determine the risk profile of the institution the main benefit of such approaches is that they lead to a better understanding of the causes of operational losses. There are six categorizes of tools which can be used to managed operational risk.

- **Audit Oversight**, which consist of reviews of business processes by an external audit department.
- **Critical Self-Assessment**, where each business unit identifies the nature and the degree of operational risk. These Subjective evaluations include expected frequency and severity of losses as well as a description of how risk is controlled.
- **Key Risk Indicators**, which consist of simple measures that provide an indication of whether risk are changing over Tim. These earning warning signs can include audit scores, staff turnover, and trade volume and so on. The assumption is that the operational risk event is more likely occur than these indicators increase.
- **Earning Volatility**, can be used after stripping the effect of market and credit risk to assess operational risk this approach consist of taking a time series of earning and computing its volatility .This measure is simple to use but has numerous problems. This

risk measure also includes fluctuations due to business and macroeconomic risk which fall outside of operational risk.

- **Causal Networks**, describe how losses can occur from a cascade of different causes. Causes and effect are linked through conditional probabilities.
- **Actuarial Models**, combine the distribution of frequency of losses with their severity distribution to produce objective distributions of losses due to operational risk. (Dun & Bradstreet, Financial Risk Management, Tata McGraw-Hill)

2.6) Managing Operational Risk:

Like market VAR, the distribution of operational losses can be used to estimate the expected losses as well as the amount of capital required to support this financial risk. The expected loss represents the size of operational losses that should be expected to occur. Typically, this represents high frequency, low severity events. This type of loss is generally absorbed as an ongoing cost and managed through internal controls. Such Losses are rarely disclosed (Cornett & Saunders, Financial Institution's Management, Mc Graw Hill, 2007).

2.7) Operational Risk Control and Mitigation:

Operational risk can be minimized in a number of ways. Internal Control methods include:

- Separation of Functions, Individual responsible for committing transactions should not perform clearance and accounting functions.
- Dual Entries, Entries (Inputs) should be matched from different sources, that is, the trade ticket and confirmation by the back office.

Reconciliations, Results (Output) should be matched from different sources-for instances, the trader's profit estimate and the computation by the middle office (Cornett & Saunders, Financial Institution's Management, Mc Graw Hill, 2007).

2.8) Operational Risk Management Elements:

- Another report explains that operational risk provides strategic direction and it also helps to ensure that efficient measurement and evaluation is performed in the institution. The framework should provide consistent policy regarding the operational risk and procedure throughout the organization. The operational risk policy should cover the firm wide as well as the operational risk associated with the specific department. Framework should provide consistent data elements which will be needed to measure the operational risk of the organization (Official Journal of European Union, 2006).
- The operational risk should reflect the complexity of business line. The operational risk of one institution is always different from the operational risk of other institutions. Therefore each institution's risk management department will use different models for the determination of operational risk (Operational Risk, October 2007, Wikipedia).

2.9) Quantitative Models for Operational Risk:

Because of the new regulatory requirement prescribed by BASEL 2, financial institutions are looking for qualitative as well as quantitative approaches to determine the operational risk. Financial analysts have designed some quantitative models from the knowledge available in probability and statistics which can help in the efficient and effective working of the financial institutions. These techniques to measure the operational risk are:-

- The point process approach
- Dependent counting variables
- Dependent point processes
- Construction method I
- Construction method I

(Andreas A. Jobst**,** November 2007, Consistent Risk Measurement and Regulation: Challenges of Model Specification, Data Collection, and Loss Reporting)

2.10) Banking Activities and Operational Risk:

- The operational risk is involved to a great extent in banking industry. There is a lot of interdependence among risk factors which may result in operational risk loss. Indeed

operational risk can occur in any function or business activity (Consultative Document of Operational Risk for Banking Supervision, May 2001).

There are a number of areas where operational risks are emerging. These include:

- Greater use of automated technology has the potential to transform risks from manual processing errors to system failure risks, as greater reliance is placed on globally integrated systems.
- Proliferation of new and highly complex products.
- Growth of e-banking transactions and related business applications expose an institution to potential new risks (e.g., internal and external fraud and system security issues).
- Large-scale acquisitions, mergers, and consolidations test the viability of new or newly integrated systems.
- Emergence of institutions acting as large-volume service providers creates the need for continual maintenance of high-grade internal controls and back-up systems.
- Development and use of risk mitigation techniques (e.g., collateral, insurance, credit derivatives, netting arrangements and asset securitizations) optimize an institution's exposure to market risk and credit risk, but potentially create other forms of risk (Supervisory Guidance on Operational Risk Advanced Measurement Approaches for Regulatory Capital).

2.11) Operational Risk in Islamic Banks:

Basically Islamic banks have equity based structure dominated by shareholders' equity and investment deposits based on profit and loss sharing (PLS). If the Islamic banks are structured as pure PLS based organizations there will be no need for capital adequacy regulations. However, because of informational asymmetry and risk aversion by investors, there currently exist fixed claim liabilities on the Islamic banking balance sheets. This scenario gives us the opportunity to impose a suitable capital adequacy framework in Islamic banks which can cater with all the major types of risks. First, capital regulations should protect risk-averse (assumed unsophisticated) depositors. This requires that bank should maintain a minimum equity and optimum asset-liabilities for the efficient working of the bank. Secondly capital regulators should give a good amount of incentives to their share holders to promote prudent behavior by the

banks. The proposed capital regulation includes a minimum risk-based equity capital cushion (as required under the Basel Accord), a prudent assets-liabilities (capital) structure (i.e. appropriate proportions of PLS- and non-PLS-based assets and liabilities) and a minimum 'financial participation' requirement. It has been observed from the analysis that such capital adequacy framework will increase the soundness of the banking system. (Muljawan, Dar and Hall, Operational Risk in Islamic Banking, 2007)

2.12) Operational Risk- Globally:

A lot of has been done towards the implementation and the progress of operational risk. Conferences have been arranged across the globe and the central banks of majority of the countries have designed the road map for the efficient and effective implementation of BASEL 2 in their countries. Wharton Financial Institution Center Risk Roundtable is one such a meeting in which assessment and management of operational risk has been discussed (Wharton Financial Institution's Round Table Conference, 2006).

2.13) Operational Risk in South Asia:

Although the Basel Capital Accord of 1988 (the existing Accord, or Basel I) was a milestone in ensuring effective banking supervision, subsequent changes in the banking industry, financial markets, risk man-agreement and bank supervision, as well as financial crises such as that in South-East Asia and East Asia in 1997-1998, led the Basel Committee on Banking Supervision to issue a revised consultative paper (CP2) in January 2001 containing a set of proposals for replacing the existing Accord. Work on a new set of international standards for capital adequacy (Dun & Bradstreet, Financial Risk Management, Tata McGraw-Hill).

2.14) BASEL ll in Pakistan:

The implementation of Basel II is a subject which has gripped a lot of interest both internationally and within Pakistan. Different efforts are underway within the country and across

the globe to ensure an effective adoption of this new international regulatory and supervisory architecture.

Such a large and diverse portfolio of risks gives a vivid description of the complexity of risk management as a subject. Yet these risks are far from being independent and require a holistic approach for their mitigation and management. It is both the financial institutions' and the regulators' responsibility to achieve an optimal management of these risks. We have an intrinsic interest in the financial health of each institution because all these institutions together define the financial stability, smooth functioning of the payment system, and eventually promote economic growth (SBP, Roadmap for the implementation of BASEL 2 in Pakistan).

Chapter 3: Research Methodology

3.1) Quantitative:

Quantitative research design will be followed to conduct the study.

3.2) Population:

The population for this study includes all the local commercial banks which are located in Pakistan. Some of these banks are given below-

- UBL (United Bank limited)
- HBL (Habib Bank Limited)
- Bank Alfallah
- Saudi Pak Bank
- Atlas Bank
- National Bank of Pakistan
- Bank of Punjab
- Askari Commercial Bank
- NIB Bank

There are some other banks which are included in the population of this study.

3.3) Sample:

Twelve banks will be taken as a sample to conduct the study. However, this sample will be taken in such a way that it could be the representative of the population. Therefore, the sample will include such banks, which have developed their good brand image over the years as well as the banks that are new in Pakistan. To ensure more validity of the research, data will be collected from three different branches of each bank.

3.4) Data Collection Methods:

Data will be collected through primary research. Through primary research, data will be collected through questionnaires.

3.5) Procedure:

To conduct the primary research questionnaires will be provided to Operation Managers of different banks. Then information will be and analyzed to observe the trends and developments towards the operational risk.

Chapter 4: Analysis

4.1) Implementation of Operational Risk:

- Out of thirty seven banks, twenty three banks suggest that operational risk is being fully implemented in their banks.
- Twelve banks from the sample suggest that operational risk has been moderately implemented in their banks.
- Two banks have suggested that operational risk is slightly implemented in their banks.

Table 1

	Frequency	Percent	Valid Percent	Cumulative Percent
absolutely	23	62.2	62.2	62.2
Moderately	12	32.4	32.4	94.6
Slightly	2	5.4	5.4	100.0
Total	37	100.0	100.0	

4.2) Control of Operational Risk after Identifying the Sources:

- Twenty five branches of different banks, which is 67% of the sample suggests that it can be controlled to a great extent after identifying the sources.
- Twenty nine percent of branches suggest that it can be controlled moderately after identifying its sources.
- Only one branch has suggested that it can be slightly controlled (operational risk) after identifying the sources.

Table 2

	Frequency	Percent	Valid Percent	Cumulative Percent
absolutely	25	67.6	67.6	67.6
Moderately	11	29.7	29.7	97.3
Slightly	1	2.7	2.7	100.0
Total	37	100.0	100.0	

4.3) Difficulty in Applying the Operational Risk according to the BASEL 2:

- Seventeen percent have suggested that it is difficult for them to manage the operational risk as prescribed under BASEL 2.
- Fifty one percent have suggests that it is moderately difficult for commercial banks to manage the operational risk of the institution as prescribed under BASEL 2.
- Seventeen percent of the branches of different commercial banks have said that it is slightly difficult to manage the operational risk under BASEL 2.
- Almost fifteen percent of the commercial banks suggests that BASEL 2 is a very good document to implement the operational risk i-e it is not difficult to implement according to the BASEL Accord.

Table 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	6	16.2	16.2	16.2
	Moderately	19	51.4	51.4	67.6
	Slightly	6	16.2	16.2	83.8
	Not at all	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

4.4) Ability of Commercial Banks to Implement the BASEL ACCORD:

- 27% percent of the banks suggest that they are absolutely able to implement the BASEL ACCORD.
- 49% of the commercial banks have suggested that the banks are moderately able to implement the BASEL ACCORD fully.
- 22% of the banks suggest that they are slightly able to implement the BASEL ACCORD fully.

Table 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	10	27.0	27.0	27.0
	Moderately	18	48.6	48.6	75.7
	Slightly	8	21.6	21.6	97.3
	Not at all	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

4.5) Policies of the State Bank:

- 35% of the banks suggest that they are absolutely satisfied with the policies and procedures provided by the state bank for the implementation of operational risk.
- 49% of the banks suggest that they are moderately satisfied with the policies and procedures given by the state bank in the efficient implementation of operational risk.
- 16% of the banks suggests that they are slightly satisfied with the polices provided by the state bank in the efficient implementation of BASEL 2.

Table 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	13	35.1	35.1	35.1
	Moderately	18	48.6	48.6	83.8
	Slightly	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

4.6) Expectation regarding the BASEL 2.5:

- 11% of the commercial banks suggest that they are absolutely thinking that BASEL 2.5 would come up with new ways which will help in the efficient implementation of operational risk.
- 22% of the commercial banks suggest that they are moderately thinking that BASEL 2.5 would come up with new ways which will help in the efficient implementation of operational risk.
- 46% of the commercial banks suggest that they are slightly thinking that BASEL 2.5 would come up with new ways which will help in the efficient implementation of operational risk.

- 21% of the commercial banks suggest that they are not thinking that BASEL 2.5 would come up with new ways which will help in the efficient implementation of operational risk.

Table 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Absolutely	4	10.8	10.8	10.8
	Moderately	8	21.6	21.6	32.4
	Slightly	17	45.9	45.9	78.4
	Not at all	8	21.6	21.6	100.0
	Total	37	100.0	100.0	

4.7) Importance of Operational Risk:

- 68% of the commercial banks think that operational risk is the most important risk for the banks.
- 22% of the commercial banks think that operational risk is the moderately important risk for the banks.
- 10% of the commercial banks think that operational risk is slightly important for them.

Table 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	25	67.6	67.6	67.6
	Moderately	8	21.6	21.6	89.2
	Slightly	4	10.8	10.8	100.0
	Total	37	100.0	100.0	

4.8) Importance of Internally developed models for the measurement of operational risk:

- 38% of the commercial banks suggest that they are absolutely in favor of models which are internally developed for the measurement of operational risk.
- 30% of the commercial banks suggest that they are moderately in favor of models which are internally developed for the measurement of operational risk.

- 19% of the commercial banks suggest that they are slightly in favor of models which are internally developed for the measurement of operational risk.
- 5% of the commercial banks suggest that they are not in favor of models which are developed internally.

Table 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	8.1	8.1	8.1
	absolutely	14	37.8	37.8	45.9
	Moderately	11	29.7	29.7	75.7
	Slightly	7	18.9	18.9	94.6
	Not at all	2	5.4	5.4	100.0
	Total	37	100.0	100.0	

4.9) Support of IT infrastructure:

- 57% of the commercial banks suggest that their IT infrastructure absolutely supports the operational risk requirements.
- 32% of the commercial banks suggest that their IT infrastructure moderately supports the operational risk requirements.

Q9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	21	56.8	56.8	56.8
	Moderately	12	32.4	32.4	89.2
	Slightly	3	8.1	8.1	97.3
	Not at all	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

4.10) Efforts of SBP:

- 54% of the commercial banks suggest that they are absolutely satisfied with the efforts of SBP in devising the guidelines regarding operational risk.
- 38% of the commercial banks suggest that they are moderately satisfied with the efforts of SBP in devising the guidelines regarding operational risk.
- 5% of the commercial banks suggest that they are slightly satisfied with the efforts of SBP in devising the guidelines regarding operational risk.
- 3% of the commercial banks suggest that they are not satisfied with the efforts of SBP in devising the guidelines regarding operational risk.

Table 10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely	20	54.1	54.1	54.1
	Moderately	14	37.8	37.8	91.9
	Slightly	2	5.4	5.4	97.3
	Not at all	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

4.11) Quantification of Operational Risk:

- 38% of the commercial banks are absolutely suggesting that operational risk is a kind of risk which is difficult to quantify.
- 32% are moderately in favor of the statement that operational risk is difficult to quantify.
- 11% are slightly in favor of the statement that operational risk is difficult to quantify.
- 19% have opinion that operational risk is not difficult to quantify.

Chapter 5: Conclusion and Recommendations

5.1) Conclusion:

- From the research it can be concluded that commercial banks are equipped well enough for the implementation of operational risk. Steps like the development of Know Your Customer form commonly known as KYC, development of soft wares and the increasing role of risk analysts in the financial institutes gives us a signal that now a days operational risk is considered to be one of the important type of risk which should be managed in order to enhance the efficiency and the productivity of the organization.
- Initially it was considered that operational is difficult to quantify and measure but now banks have managed this problem and at present it is not as difficult to quantify and measure the risk as it was in past.
- Banks have been able to identify what are the key risk indicators for the operational risk which are volume of trades processed; volatility in profit and loss, employee turnover, and average overtime per employee etc. because of the identification of these factors banks can enhance the overall productivity of the organization.
- Initially it was difficult for the banks to maintain the capital requirements for the efficient implementation of operational risk but now they have cope with that problem.
- It can also be concluded that it is still difficult for the banks to manage that part of operational risk which arises from the external factors.
- It was assumed that commercial banks are facing difficulties in the implementation of operational risk but from the research it is clear that commercial banks are not facing a very difficult situation for the implementation of this risk.
- Infact to attract more deposit holders toward their banks, now a day's senior management is focusing more on improving their operations so that profitability can be enhanced.

5.2) Recommendations:

As we know that most of the cases which provide us the data usually don't provide actual facts. This is also the case with the banks. Commercial banks still have to do much more for the

implementation of operational risk. The risk management department of most of the banks is more working on the credit risk management. Therefore they should take more steps for the implementation of operational risk.

Commercial banks should concentrate on those drivers of operational risk which are identified in BASEL ll. These operational risk drivers are:-

Internal Frauds

External Frauds

Employment practices and workplace

Damage to physical assets

Business disruption and system failure

Execution, delivery and process management

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Appendix

Questionnaire:

1. To what extent the operational risk Management has actually been implemented in your Bank?

   ___absolutely _____Moderately _____Slightly _____Not at all

2. Could operational risk be controlled after identifying the sources?

   ___absolutely _____Moderately _____Slightly _____Not at all

3. Have you developed methodology for identifying and measuring credit risk for your internal needs?

   ___absolutely _____Moderately _____Slightly _____Not at all

4. It is difficult for the banks to implement the operational risk as prescribed under BASEL 2?

   ___absolutely _____Moderately _____Slightly _____Not at all

5. Banks are well equipped to implement the BASEL-II Accord fully?

   ___absolutely _____Moderately _____Slightly _____Not at all

6. The process and Policies given by State Bank are good enough to help Banks implement the BASEL-II Accord?

   ___absolutely _____Moderately _____Slightly _____Not at all

7. Do you think that BASEL-2.5 would come up with some ways of implementing the BASEL-Accord in more appropriate way?

   ___absolutely _____Moderately _____Slightly _____Not at all

8. Operational risk is the most important risk for a Bank?

   ___absolutely _____Moderately _____Slightly _____Not at all

9. Does internally developed models for measuring economic capital for operational risk are better than the models which are externally developed?

   ___absolutely _____Moderately _____Slightly _____Not at all

10. Does your existing IT infrastructure support operational risk requirements

___absolutely _____Moderately _____Slightly _____Not at all