

FINAL PROJECT REPORT

Risk Management in Various Banking Operations

Table of Contents

Abstract.....	
Introduction.....	
Purpose of Report.....	
Scope of the Study.....	
Methodology.....	
Limitations.....	
Introduction of Banking in India.....	
Introduction.....	
History.....	
Commercial Banks.....	
Banking Services in India.....	
Company Profile.....	
Introduction.....	
History.....	
Product and Services.....	
Organization Structure.....	
Banking Operations.....	

Operational Risk.....	
Expected Vs. Unexpected Losses.....	
Reasons for Increasing Focus on operational Risk Management.....	
Business Continuity Plan.....	
BCP methodology.....	
Basel Concept.....	
From Basel I to Basel II.....	
Basel II Concept.....	
Principles of Operational RM.....	
Operational Risk under Basel II.....	
The Basic Indicator Approach	
Prescribed Formulae.....	
Utility.....	
Drawbacks.....	
The Standardized Approach.....	
Prescribed Formulae.....	
Requirements for Adopting.....	
Process of Mapping.....	
Utility.....	
Drawbacks.....	
Difference between BIA & SA.....	
Advanced Measurement Approach... ..	
Requirements of Adopting.....	
Main Categories of Operational Risk.....	
Bibliography.....	
Annexure.....	

From Branch to RO.....

Check list of OR incidents.....

Incidence under operation risk.....

Bank Activities.....

ABSTRACT

Managing a multitude of internal and external risks is one of the most significant challenges facing global organizations today. The Basel Committee on banking supervision has recently initiated work related to operational risk. Operational risk is one of the important arms of the risk triangle-the other two being Credit Risk and Market Risk. Managing such risk is becoming an important feature of sound risk management practice in modern financial markets. Any organization, particularly in banking sector, is squarely exposed to operational risks emanating within or outside the organization. Furthermore for the first time in the history of global banking, operational risk capital charge has been made a mandatory requirement in banking.

This project is dedicated on '**Risk Management in various banking operations**' attempted to propose a approach so that banks can prepare itself to identify and manage risks as an ongoing basis. For this purpose, a complete study on the operational risk management is done. Consequently the effects on the profitability and capital requirement for the management of risk of bank were analyzed.

This report elevates the task performed so far for the completion of the summer internship program, which involves the application of my knowledge in the real scenario. For pursuing summer internship program, I opted for "**Punjab National Bank**" which is one of the India's largest banks. The main motive of this study is to find out how Punjab National Bank is finding and measuring the operational risk and through which policies it is trying to mitigate this risk as much as possible. There has been sufficient coverage of the basic concepts that revolve around operational risk in banks. To enhance the quality of the project under study the measurement criteria of operational risk have been highlighted.

This report also covers the Banking Operations in brief so that one can easily understand the banking operation while managing and mitigating the different types of risks by the bank.

INTRODUCTION ON REPORT

Purpose of the report

The project report is a detailed documentation of the work done and learning acquired during Summer Internship Program at **Punjab National Bank** as an Internship trainee. The report is based on the work done for completion of the project assigned. The report contains important features of bank's operational risk management policy which plays critical role in analyzing the impact on gross income and the Capital adequacy of the bank. The project specifies the risk management approaches and methods of operational risk mitigations.

Scope of the study

- To know the operational risk mitigation techniques used in Punjab National Bank.
- To understand the approach of the company to access risk.
- To understand the concept of operational risk.
- To understand the techniques of operational risk measurement.
- To understand the Basel II concept.
- To understand the risk mapping for operational risk.
- To understand supervisory review system.
- And finally to understand the banking operations.

Methodology

- First understand the basic concepts and theories in operational risk which will make it easy for me to understand the business process in risk management.
- Use of internet, literature as a basic tool for prelim study.
- Reading the regulator's (RBI) Guidelines to understand the Banking Environment in the country.
- Reading Basel II Guidelines regarding the operational risk mitigation to understand the work environment of the bank.
- Reading the Reports of Punjab National Bank to understand the operational risk aspect of different branches of the bank.
- Interact with Risk Management team to get the valuable information and acquire additional knowledge regarding the risk portfolio of the Bank.

Limitation of Study

- Current Data is not available.

- Time Constraint

INTRODUCTION OF BANKING IN INDIA

Introduction

The banking section will navigate through all the aspects of the Banking System in India. It will discuss upon the matters with the birth of the banking concept in the country to new players adding their names in the industry in coming few years.

The banker of all banks, Reserve Bank of India (RBI), the Indian Banks Association (IBA) and top 20 banks like IDBI, HSBC, ICICI, ABN AMRO, etc. has been well defined under three separate heads with one page dedicated to each bank.

However, in the introduction part of the entire banking cosmos, the past has been well explained under three different heads namely:

- History of Banking in India
- Nationalization of Banks in India
- Scheduled Commercial Banks in India

The first deals with the history part since the dawn of banking system in India. Government took major step in the 1969 to put the banking sector into systems and it nationalized 14 private banks in the mentioned year. This has been elaborated in Nationalization Banks in India. The last but not the least explains about the scheduled and unscheduled banks in India. Section 42 (6) (a) of RBI Act 1934 lays down the condition of scheduled commercial banks. The description along with a list of scheduled commercial banks are given on this page

History of Banking in India

Without a sound and effective banking system in India it cannot have a healthy economy. The banking system of India should not only be hassle free but it should be able to meet new challenges posed by the technology and any other external and internal factors.

For the past three decades India's banking system has several outstanding achievements to its credit. The most striking is its extensive reach. It is no longer confined to only metropolitans or cosmopolitans in India. In fact, Indian banking system has reached even to the remote corners of the country. This is one of the main reasons of India's growth process.

The government's regular policy for Indian bank since 1969 has paid rich dividends. With the nationalization of 14 major private banks of India. Not long ago, an account holder had to wait for hours at the bank counters for getting a draft or for withdrawing his own money. Today,

he has a choice. Gone are days when the most efficient bank transferred money from one branch to other in two days. Now it is simple as instant messaging or dials a pizza. Money has become the order of the day. The first bank in India, though conservative, was established in 1786. From 1786 till today, the journey of Indian Banking System can be segregated into three distinct phases. They are as mentioned below:

- Early phase from 1786 to 1969 of Indian Banks
- Nationalization of Indian Banks and up to 1991 prior to Indian banking sector Reforms. New phase of Indian Banking System with the advent of Indian Financial & Banking Sector Reforms after 1991.

To make this write-up more explanatory, I prefix the scenario as Phase I, Phase II and Phase III.

Phase I

The General Bank of India was set up in the year 1786. Next came Bank of Hindustan and Bengal Bank. The East India Company established Bank of Bengal (1809), Bank of Bombay (1840) and Bank of Madras (1843) as independent units and called it Presidency Banks. These three banks were amalgamated in 1920 and Imperial Bank of India was established which started as private shareholders banks, mostly Europeans shareholders.

In 1865 Allahabad Bank was established and first time exclusively by Indians, Punjab National Bank Ltd. was set up in 1894 with headquarters at Lahore. Between 1906 and 1913, Bank of India, Central Bank of India, Bank of Baroda, Canara Bank, Indian Bank, and Bank of Mysore were set up. Reserve Bank of India came in 1935.

During the first phase the growth was very slow and banks also experienced periodic failures between 1913 and 1948. There were approximately 1100 banks, mostly small. To streamline the functioning and activities of commercial banks, the Government of India came up with The Banking Companies Act, 1949 which was later changed to Banking Regulation Act 1949 as per amending Act of 1965 (Act No. 23 of 1965). Reserve Bank of India was vested with extensive powers for the supervision of banking in India as the Central Banking Authority.

During those day's public has lesser confidence in the banks. As an aftermath deposit mobilization was slow. Abreast of it the savings bank facility provided by the Postal department was comparatively safer. Moreover, funds were largely given to traders.

Phase II

Government took major steps in this Indian Banking Sector Reform after independence. In 1955, it nationalized Imperial Bank of India with extensive banking facilities on a large scale especially in rural and semi-urban areas. It formed State Bank of India to act as the principal agent of RBI and to handle banking transactions of the Union and State Governments all over the country. Seven banks forming subsidiary of State Bank of India was nationalized in 1960 on 19th July, 1969, major process of nationalization was carried out. It was the effort of the then Prime

Minister of India, Mrs. Indira Gandhi. 14 major commercial banks in the country were nationalized.

Second phase of nationalization Indian Banking Sector Reform was carried out in 1980 with seven more banks. This step brought 80% of the banking segment in India under Government ownership.

The following are the steps taken by the Government of India to Regulate Banking Institutions in the Country:

- 1949: Enactment of Banking Regulation Act.
- 1955: Nationalization of State Bank of India.
- 1959: Nationalization of SBI subsidiaries.
- 1961: Insurance cover extended to deposits.
- 1969: Nationalization of 14 major banks.
- 1971: Creation of credit guarantee corporation.
- 1975: Creation of regional rural banks.
- 1980: Nationalization of seven banks with deposits over 200 crore.

After the nationalization of banks, the branches of the public sector bank India rose to approximately 800% in deposits and advances took a huge jump by 11,000%.

Banking in the sunshine of Government ownership gave the public implicit faith and immense confidence about the sustainability of these institutions.

Phase III

This phase has introduced many more products and facilities in the banking sector in its reforms measure. In 1991, under the chairmanship of M Narasimham, a committee was set up by his name which worked for the liberalisation of banking practices.

The country is flooded with foreign banks and their ATM stations. Efforts are being put to give a satisfactory service to customers. Phone banking and net banking is introduced. The entire system became more convenient and swift. Time is given more importance than money.

The financial system of India has shown a great deal of resilience. It is sheltered from any crisis triggered by any external macroeconomics shock as other East Asian Countries suffered. This is all due to a flexible exchange rate regime, the foreign reserves are high, the capital account is not yet fully convertible, and banks and their customers have limited foreign exchange exposure.

Commercial Banks in India

The commercial banking structure in India consists of:

- Scheduled Commercial Banks in India
- Unscheduled Banks in India

Scheduled Banks in India constitute those banks which have been included in the Second Schedule of Reserve Bank of India (RBI) Act, 1934. RBI in turn includes only those banks in this schedule which satisfy the criteria laid down vide section 42 (6) (a) of the Act.

As on 30th June, 1999, there were 300 scheduled banks in India having a total network of 64,918 branches. The scheduled commercial banks in India comprise of State bank of India and its associates (8), nationalized banks (19), foreign banks (45), private sector banks (32), co-operative banks and regional rural banks.

"Scheduled banks in India" means the State Bank of India constituted under the State Bank of India Act, 1955 (23 of 1955), a subsidiary bank as defined in the State Bank of India (Subsidiary Banks) Act, 1959 (38 of 1959), a corresponding new bank constituted under section 3 of the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 (5 of 1970), or under section 3 of the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980 (40 of 1980), or any other bank being a bank included in the Second Schedule to the Reserve Bank of India Act, 1934 (2 of 1934), but does not include a co-operative bank".

"Non-scheduled bank in India" means a banking company as defined in clause (c) of section 5 of the Banking Regulation Act, 1949 (10 of 1949), which is not a scheduled bank".

The following are the Scheduled Banks in India (Public Sector):

- State Bank of India
- State Bank of Bikaner and Jaipur
- State Bank of Hyderabad
- State Bank of Indore
- State Bank of Mysore

- State Bank of Saurashtra
- State Bank of Travancore
- Andhra Bank
- Allahabad Bank
- Bank of Baroda
- Bank of India
- Bank of Maharashtra
- Canara Bank
- Central Bank of India
- Corporation Bank
- Dena Bank
- Indian Overseas Bank
- Indian Bank
- Oriental Bank of Commerce
- Punjab National Bank
- Punjab and Sind Bank
- Syndicate Bank
- Union Bank of India
- United Bank of India
- UCO Bank
- Vijaya Bank

The following are the Scheduled Banks in India (Private Sector):

- ING Vysya Bank Ltd

- Axis Bank Ltd
- Indusind Bank Ltd
- ICICI Bank Ltd
- South Indian Bank
- HDFC Bank Ltd
- Centurion Bank Ltd
- Bank of Punjab Ltd
- IDBI Bank Ltd

The following are the Scheduled Foreign Banks in India:

- American Express Bank Ltd.
- ANZ Gridlays Bank Plc.
- Bank of America NT & SA
- Bank of Tokyo Ltd.
- Banque Nationale de Paris
- Barclays Bank Plc
- Citi Bank N.C.
- Deutsche Bank A.G.
- Hongkong and Shanghai Banking Corporation
- Standard Chartered Bank.
- The Chase Manhattan Bank Ltd.
- Dresdner Bank AG.

Banking Services in India

With years, banks are also adding services to their customers. The Indian banking industry is passing through a phase of customers market. The customers have more choices in choosing their banks. A competition has been established within the banks operating in India. With stiff competition and advancement of technology, the services provided by banks have become more easy and convenient. The past days are witness to an hour wait before withdrawing cash from accounts or a cheque from north of the country being cleared in one month in the south.

This section of banking deals with the latest discovery in the banking instruments along with the polished version of their old systems.

Bank Account

It is the most common and first service of the banking sector. There are different types of bank account in Indian banking sector. The bank accounts are as follows:

- Bank Savings Account - Bank Savings Account can be opened for eligible person / persons and certain organizations / agencies (as advised by Reserve Bank of India (RBI) from time to time)
- Bank Current Account - Bank Current Account can be opened by individuals / partnership firms / Private and Public Limited Companies / HUFs / Specified Associates / Societies / Trusts, etc.
- Bank Term Deposits Account - Bank Term Deposits Account can be opened by individuals / partnership firms / Private and Public Limited Companies / HUFs/ Specified Associates / Societies / Trusts, etc.
- Bank Account Online - With the advancement of technology, the major banks in the public and private sector has facilitated their customer to open bank account online. Bank account online is registered through a PC with an internet connection. The advent of bank account online has saved both the cost of operation for banks as well as the time taken in opening an account.

Plastic Money

Credit cards in India are gaining ground. A number of banks in India are encouraging people to use credit card. The concept of credit card was used in 1950 with the launch of charge cards in USA by Diners Club and American Express. Credit card however became more popular with use of magnetic strip in 1970.

Credit card in India became popular with the introduction of foreign banks in the country.

Credit cards are financial instruments, which can be used more than once to borrow money or buy products and services on credit. Basically banks, retail stores and other businesses issue these.

Loans

Banks in India with the way of development have become easy to apply in loan market. The following loans are given by almost all the banks in the country:

- Personal Loan
- Car loan or Auto Loan
- Loan against Shares
- Home Loan
- Education Loan or Student Loan

In **Personal Loan**, one can get a sanctioned loan amount between Rs. 25,000 to 10,00,000 depending upon the profile of person applying for the loan. SBI, ICICI, HDFC, HSBC are some of the leading banks which deals in Personal Loan.

Almost all the banks have jumped into the market of **car loan** which is also sometimes termed as auto loan. It is one of the fast moving financial products of banks. Car loan / auto loan are sanctioned to the extent of 85% upon the ex-showroom price of the car with some simple paper works and a small amount of processing fee.

Loan against shares is very easy to get because liquid guarantee is involved in it. **Home loan** is the latest craze in the banking sector with the development of the infrastructure. Now people are moving to township outside the city. More number of townships is coming up to meet the demand of 'house for all'. The RBI has also liberalized the interest rates of home loan in order to match the repayment capability of even middle class people. Almost all banks are dealing in home loan. Again SBI, ICICI, HDFC, HSBC are leading.

The **educational loan**, rather to be termed as student loan, is a good banking product for the mass. Students with certain academic brilliance, studying at recognized colleges/universities in India and abroad are generally given education loan / student loan so as to meet the expenses on tuition fee/ maintenance cost/books and other equipment.

Money Transfer

Beside lending and depositing money, banks also carry money from one corner of the globe to another. This act of banks is known as transfer of money. This activity is termed as remittance business. Banks generally issue Demand Drafts, Banker's Cheques, Money Orders or other such instruments for transferring the money. This is a type of Telegraphic Transfer or Tele Cash Orders.

It has been only a couple of years that banks have jumped into the money transfer businesses in India. The international money transfer market grew 9.3% from 2003 to 2004 i.e. from US\$213 bn. to US\$233 bn. in 2004. Economists say that the market of money transfer will further grow at a cumulative 12.1% average growth rate through 2009.

Future of Banking in India

A healthy banking system is essential for any economy striving to achieve good growth and yet remain stable in an increasingly global business environment. The Indian banking system has witnessed a series of reforms in the past, like deregulation of interest rates, dilution of government stake in PSBs, and increased participation of private sector banks. It has also undergone rapid changes, reflecting a number of underlying developments. This trend has created new competitive threats as well as new opportunities. This paper aims to foresee major future banking trends, based on these past and current movements in the market.

Given the competitive market, banking will (and to a great extent already has) become a process of choice and convenience. The future of banking would be in terms of integration. This is already becoming a reality with new-age banks such as YES Bank, and others too adopting a single-PIN. Geography will no longer be an inhibitor. Technology will prove to be the differentiator in the short-term but the dynamic environment will soon lead to its saturation and what will ultimately be the key to success will be a better relationship management.

Overview

If one were to say that the future of banking in India is bright, it would be a gross understatement. With the growing competition and convergence of services, the customers (you and I) stand only to benefit more to say the least. At the same time, emergence of a multitude of complex financial instruments is foreseen in the near future (the trend is visible in the current scenario too) which is bound to confuse the customer more than ever unless she spends hours (maybe days) to understand the same. Hence, I see a growing trend towards the importance of relationship managers. The success (or failure) of any bank would depend not only on tapping the untapped customer base (from other departments of the same bank, customers of related similar institutions or those of the competitors) but also on the effectiveness in retaining the existing base.

India has witness to a sea change in the way banking is done in the past more than two decades. Since 1991, the Reserve Bank of India (RBI) took steps to reform the Indian banking system at a measured pace so that growth could be achieved without exposure to any macro- environment and systemic risks. Some of these initiatives were deregulation of interest rates, dilution of the government stake in public sector banks (PSBs), guidelines being issued for risk management, asset classification, and provisioning. Technology has made tremendous impact in banking. 'Anywhere banking' and 'Anytime banking' have become a reality. The financial sector now operates in a more competitive environment than before and intermediates relatively large volume of international financial flows. In the wake of greater financial deregulation and global

financial integration, the biggest challenge before the regulators is of avoiding instability in the financial system.

COMPANY PROFILE

Introduction

Punjab National Bank of India, the first Indian bank started only with Indian capital, was nationalized in July 1969 and currently the bank has become a front-line banking institution in India with 4525 Offices including 432 Extension Counters. The corporate office of the bank is at New Delhi. Punjab National Bank of India has set up representative offices at Almaty (Kazakhstan), Shanghai (China) and in London and a full fledged Branch in Kabul (Afghanistan).

Punjab National Bank with 4497 offices and the largest nationalized bank is serving its 3.5 crore customers with the following wide variety of banking services:

- Corporate banking
- Personal banking
- Industrial finance
- Agricultural finance
- Financing of trade
- International banking

Punjab National Bank has been ranked 38th amongst top 500 companies by The Economic Times. PNB has earned 9th position among top 50 trusted brands in India.

Punjab National Bank India maintains relationship with more than 200 leading international banks world wide. PNB India has Rupee Drawing Arrangements with 15 exchange companies in UAE and 1 in Singapore.

History of the bank

Punjab National Bank (PNB) was registered on May 19, 1894 under the Indian Companies Act with its office in Anarkali Bazaar Lahore. The Bank is the second largest government-owned

commercial bank in India with about 4,500 branches across 764 cities. It serves over 37 million customers. The bank has been ranked 248th biggest bank in the world by Bankers Almanac, London. The bank's total assets for financial year 2007 were about US\$60 billion. PNB has a banking subsidiary in the UK, as well as branches in Hong Kong and Kabul, and representative offices in Almaty, Dubai, Oslo, and Shanghai.

1895: PNB commenced its operations in Lahore. PNB has the distinction of being the first Indian bank to have been started solely with Indian capital that has survived to the present. The first entirely Indian bank, the Ouch Commercial Bank, was established in 1881 in Faizabad, but failed in 1958. PNB's founders included several leaders of the Swadeshi movement such as Dyal Singh Majithia and Lala HarKishen Lal,[1] Lala Lalchand, Shri Kali Prosanna Roy, Shri E.C. Jessawala, Shri Prabhu Dayal, Bakshi Jaishi Ram, and Lala Dholan Dass. Lala Lajpat Rai was actively associated with the management of the Bank in its early years.

- 1904: PNB established branches in Karachi and Peshawar.
- 1940: PNB absorbed Bhagwan Dass Bank, a scheduled bank located in Delhi circle.
- 1947: Partition of India and Pakistan at Independence. PNB lost its premises in Lahore, but continued to operate in Pakistan.
- 1951: PNB acquired the 39 branches of Bharat Bank (est. 1942); Bharat Bank became Bharat Nidhi Ltd.
- 1961: PNB acquired Universal Bank of India.
- 1963: The Government of Burma nationalized PNB's branch in Rangoon (Yangon).
- September 1965: After the Indo-Pak war the government of Pakistan seized all the offices in Pakistan of Indian banks, including PNB's head office, which may have moved to Karachi.
PNB also had one or more branches in East Pakistan (Bangladesh).
- 1960s: PNB amalgamated Indo Commercial Bank (est. 1933) in a rescue.
- 1969: The Government of India (GOI) nationalized PNB and 13 other major commercial banks, on July 19, 1969.
- 1976 or 1978: PNB opened a branch in London.
- 1986 The Reserve Bank of India required PNB to transfer its London branch to State Bank of India after the branch was involved in a fraud scandal.
- 1986: PNB acquired Hindustan Commercial Bank (est. 1943) in a rescue. The acquisition added Hindustan's 142 branches to PNB's network.

- 1993: PNB acquired New Bank of India, which the GOI had nationalized in 1980.
- 1998: PNB set up a representative office in Almaty, Kazakhstan.
- 2003: PNB took over Nedungadi Bank, the oldest private sector bank in Kerala. Rao Bahadur T.M. Appu Nedungadi, author of Kundalatha, one of the earliest novels in Malayalam, had established the bank in 1899. It was incorporated in 1913, and in 1965 had acquired selected assets and deposits of the Coimbatore National Bank. At the time of the merger with PNB, Nedungadi Bank's shares had zero value, with the result that its shareholders received no payment for their shares.
- PNB also opened a representative office in London.
- 2004: PNB established a branch in Kabul, Afghanistan.
- PNB also opened a representative office in Shanghai.
PNB established an alliance with Everest Bank in Nepal that permits migrants to transfer funds easily between India and Everest Bank's 12 branches in Nepal.
- 2005: PNB opened a representative office in Dubai.
- 2007: PNB established PNBIL - Punjab National Bank (International) - in the UK, with two offices, one in London, and one in South Hall. Since then it has opened a third branch in Leicester, and is planning a fourth in Birmingham.
Gatin Gupta became Chairmen of Punjab National Bank.
- 2008: PNB opened a branch in Hong Kong.
- 2009: PNB opened a representative office in Oslo, Norway.

In spite of being at the forefront of PLR cuts, the bank posted a healthy growth in Net Interest Income (NII) of 29% y-o-y.

Product and Services

Savings Fund Account - Total Freedom Salary Account, PNB Prudent Sweep, PNB Vidyarthi SF Account, PNB Mitra SF

Account Current Account - PNB Vaibhav, PNB Gaurav, PNB Smart Roamer

Fixed Deposit Schemes - Spectrum Fixed Deposit Scheme, Anupam Account, Mahabachat Schemes, Multi Benefit Deposit

Scheme Credit Schemes - Flexible Housing Loan, Car Finance, Personal Loan, Credit Cards

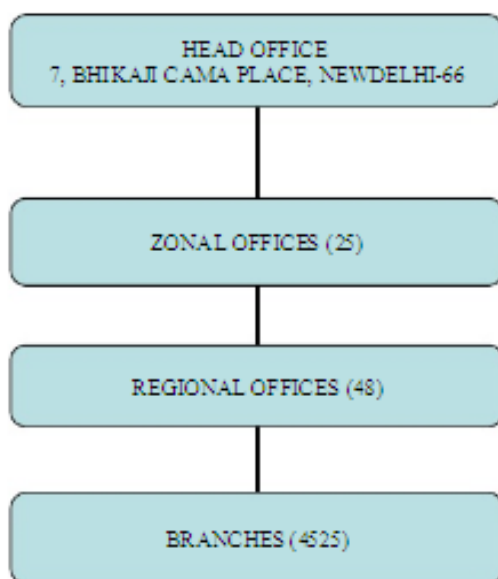
Social Banking - Mahila Udyam Nidhi Scheme, Krishi Card, PNB Farmers Welfare Trust

Corporate Banking - Gold Card scheme for exporters, EXIM finance

Business Sector - PNB Karigar credit card, PNB Kushal Udhmi, PNB Pragati Udhmi, PNB Vikas Udhmi.

Apart from these, and the PNB also offers locker facilities, senior citizens schemes, PPF schemes and various E-services.

Organization Structure



BANKING OPERATIONS

With the expansion of trade and commerce, the concept of banking gained importance. The handling of banking gradually transcended from individuals to groups and later to companies. With the Industrial Revolution of the 18th and 19th centuries, it attained a more significant place in the area of lending. Banks in their first primitive beginnings and later in more developed forms did not enjoy a steady and harmonious growth. Banking emerged and evolved through various phases adapting it continuously to meet the increasing needs of trade and commerce.

Banks are in business to make money. It is hard to manage without a bank, and it is hard for them to manage without us. On the face of it, this looks like a joint venture. However, since all alliances are based on absolute trust and hate turbulent situations, and because these two features

seem to be coming into play, it is not surprising that this is causing a certain amount of concern to depositors.

Basically, a client places money into his account. The bank will lend that money to other clients and make a profit on the deal. If the client banked say \$10000, the bank can lend \$90000 out because they must maintain a 10 per cent cash reserve ratio. In other countries, the cash reserve ratio requirement can be higher or lower. Any country can decide to alter the cash reserve ratio if needs be.

There is nothing to stop a bank to set aside more than the required minimum, meaning having excess reserves. It is not particularly rewarding for banks to do this, since they get no interest on that money, albeit they can channel it out on short and overnight terms to banks which need to maintain their minimum reserve ratio.

Getting back to that \$90000 the bank can lend out, and let us say grant overdrafts but creating of course a liability factor, as the bank has to pay out whenever the various borrowers issue their cheques.

The position of the bank is that it has a total cash sum of \$10000 received. However, it has lent out deposits of totaling \$90000. Add this together and you get a figure of \$100000 representing total assets which are the \$90000 in overdrafts plus the original \$10000 cash received, which of course includes the required 10% reserve.

What took place is that the bank granted loans worth \$90000 giving birth to money which did not exist before, based on the \$10000 received in cash and locked in the safe. People do not put in all the money on the same day, and they do not take out all the money on the same day. Cash in form of bank reserves is there to meet some withdrawals that may possibly be required. Banks have been managing quite well with small cash reserves in their safe, because they hold a number of liquid assets which they can sell for instant money. It is better for them to earn more money out of these liquid assets than having cash. Bankers are clever enough to know what kind of mixture of investments they should hold not to be caught with their pants down.

As well as lending money both short and long term, banks place investments in other areas. For instance, apart from the liquid assets, they can purchase long term government bonds and other securities. However, without cash reserves it is not possible to give birth to additional money unless breaking the rules. Of course banking is far more intricate than that, but at least one can grasp some basics, and understand why, when a spanner is thrown into the works due to whatever reason, hiccups can follow.

Commercial banks undertake the important process of financial intermediation where funds or savings of the surplus sectors are channeled to deficit sectors. Funds are transferred through



lending by banks or by creation of financial liabilities such as bonds and equity shares. Banks intermediate by obtaining funds from savers in exchange for the liabilities of their own and then again give loans to others. Through their intermediary activities, banks provide a package of information and risk sharing services to their customers. They also share the risk by structuring their activities and hedge risks through derivative products to maximize profitability. Intermediary services are of two types: Brokerage and asset transformation.

The brokerage function brings together buyers and lenders and reduces market imperfections through research, and dissemination of information.

The asset transformation function enables issue of claims against the banks themselves, which differ from the assets they acquire. Mutual funds, insurance companies, banks and depository institutions undertake size transformation by providing many depositors with a share of a large asset or issuing debt against equity.

Banks combine various transaction services with financial intermediation. They provide three transformation services when they undertake intermediation process. First, they enable liability, asset and size transformation, which includes mobilization of funds and their allocation (provision of large loans on the basis of numerous small deposits). Second, they enable maturity transformation banks to transform securities with short maturities, offered to depositors, into securities with long maturities that borrowers desire. This implies that banks borrow on a short-term and lend on a long-term. They make sure that their assets mature in time to provide them with adequate funds. Online banking is increasingly becoming an important part of account packages, as they allow access twenty four hours a day they are extremely useful for those who operate under a hectic schedule. They can save time and energy by removing the need to phone bank representatives and spend hours on hold. The benefits may seem fractional but your business will see results by employing online banking solutions.

OPERATIONAL RISK

Operational risk is the one area that is faced by all types of organizations. By now, the financial industry has developed standard methods to measure credit risk and market risk. The industry is turning next to operational risk, which has proved to be an important cause of financial losses.

The problem is that operational risk is much harder to identify than market and credit risk. Even it was very difficult to define the operational risk until the Basel Accord II in June 2004, there was no universal definition of operational risk in banking. Prof Hans Geiger, an international authority on risk management, has viewed operational risk from direct angle and an indirect angle as under:

Indirect Angle: “Operational risks are all those risks which cannot be classified as credit risk and market risk”.

Direct Angle: “Operational risk is an expression of the danger of unexpected direct or indirect losses resulting from inadequate or failed internal processes, people and system and from external events.

Basel II has defined ‘Operational Risk’ as “The risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events”. All institutes generally follow the logic proposed by Basel Committee and share the definition based on four types of risk factors.

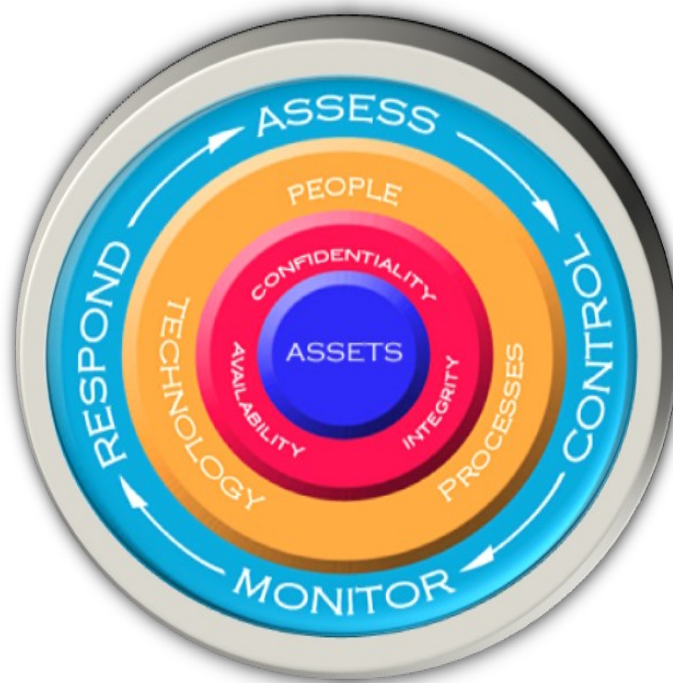
People: The first factor refers to losses coming from events such as human errors, frauds, violation of internal rules and procedures (unauthorized trading, insider dealing) and more generally, problems of incompetence and negligence of the financial institution human resources. There are many examples of significant losses suffered by major financial institutions which can be related to this factor. **E.g.** In May 2001, a Lehman Brothers dealer wrongly input a 300 USD million value for a stock market trade rather than USD3 million, causing a 120 points reduction in the FTSE 100 stock market index.

System: This factor includes the event related to information system and technology in general. They include hardware and/or software failures, computer hacking or viruses, and telecommunications failures. The growing reliance of the financial industry on information system and, more generally, on technological resources, has significantly increased the importance of this type of risk. A number of examples of significant losses suffered by financial institutions are also extensively documented, regarding this type of risk factor. They typically include losses originated by events such as unauthorized access to information and system security, excessive risk taking due to software failure, loss of data due to information system failures.

Processes: This factor includes the losses that originate from inadequacies in the internal processes and procedures. Examples include events such as the violation of the information system security due to insufficient controls (security risk), errors in the execution and/or settlement of securities and foreign currency transactions (transaction and settlement errors), inadequate record-keeping, accounting and taxation errors, mispricing and errors in risk

measurement due to problems in the internal models and methodologies and breaches of mandate.

External Events: This final factor includes all the losses a bank may suffer as a consequence of a wide range of external events which typically are not under the control of the bank’s management. These include events such as changes in the political, regulatory and legal environment that negatively affect the bank’s profitability, operational failure at suppliers or outsourced operations, criminal acts such as theft, earthquake and other natural disasters. This type of operational risk losses are significantly different from the ones related to people, system and processes. Indeed, while the later can be minimized, both in their frequency and their impacts, through the development of adequate internal procedure (e.g. clearly defining individual responsibilities, and adequate internal control policies), the occurrence of external events does not depend on the bank’s internal investments, policies and efforts, although the bank management plays a role in trying to minimize their impact on the P & L account, e.g. through adequate contingency plans.



People	Systems	Processes	External Events
Fraud, collusion and criminal activities	IT problems (hardware or software failures, computer	Execution, registration, settlement	Criminal activities (theft, terrorism or and vandalism)
Violation of internal			

or external rules (unauthorized trading, insider dealer, etc.)	hacking or viruses etc.)	documentation errors (transaction risk)	Political and military events (wars or internal sanctions)
Error related to management incompetence or negligence	Unauthorized access to information and system security	Errors in models, methodologies and mark to market	Changes in the political, legal, regulatory and tax environment
Loss of important employees (illness, injury, problems in retaining staff, etc.)	Unavailable and questionable integrity of data	Accounting and taxation errors, inadequate internal procedures, compliance issues	Natural events (fire, earthquake, flood etc.)
Violation of system security	Telecommunications failures Utility outages	Breach of mandate	Operational failure at suppliers or outsourced operations
		Inadequate definition and attribution of responsibilities	

External factors might also cause reputational losses (although these do not fall into operational risk, as defined by Basel Committee). Think e.g. of a bank financing a company which is subsequently found guilty of selling weapons to a rouge state supporting terrorism: if the bank's brand and the company's name are repeatedly mentioned together in the press, the bank is likely to suffer a damage, e.g. because customers may want to move their accounts.

EXPECTED vs UNEXPECTED LOSSES

The Expected loss represents the size of operational loss that is 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.

The Unexpected loss represents the deviation between the quantize loss at some confidence level and expected loss. Typically, this represents lower frequency, higher severity events. This type of loss is generally offset against capital reserves or transferred to an outside insurance company, when available. Such losses are sometimes disclosed publicly but often with little detail. Many risk managers are of the view that expected operational losses are 'Small' losses but unexpected losses are large but sustainable losses. But these definitions are not objective or practical. For example, it's impossible to determine the point at which an individual loss becomes large enough to be transformed from an expected to an unexpected loss. In the 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 measureable estimation tests be met and losses be probable before provision 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. There are some cases where contingent reserves may be provided that relate to operational risk matters. An example is cost related to lawsuits arising from a control breakdown. Also, there are certain types of high frequency/low severity losses, such as those related to credit card fraud, that appear to be deducted from income as they occur. However, provisions are generally not set up in advance for these. Banks have a highly likely incidence of expected, regular operational risk losses that are deducted from reported income in the year. Fraud losses in credit card books are an example. In these limited cases, it might be appropriate to calibrate the capital charge to unexpected losses plus some cushion of imprecision. This approach assumes that the bank's income stream for the year will be sufficient to cover expected losses and that the bank can be relied upon to regularly deduct losses.

Against this background, the committee proposes to calibrate the charge for operational risk based on expected and unexpected losses, but to allow some recognition for provisioning and loss deduction.

REASONS FOR INCREASING FOCUS ON OPERATIONS MANAGEMENT

- On-going spate of financial deregulations and globalization.
- Influence of technology and automation in managing business with other side effects.
- Complex organizational structures arising out of reorganization of business (e.g. merger/demerger etc.).
- Opportunities for business process outsourcing.
- Growing complexity of products/services, as banks now provide total business services.
- With liberalization and globalization, banks vie very hard with each other with business.

- Basel accord II guidelines require, for the first time, capital allocation for operational risks.

Some case histories given below also signify the importance of operational risk management:

John Rusnak

AIB's US subsidiary, all first Financial, is currently at the centre of an international fraud investigation, after it was revealed that John Rusnak defrauded the bank of \$750m by generating fictitious foreign exchange transactions.

Although the exact details of the fraud are yet to be released, it is believed that irregular trading activities had been taking place in AIB for about a year and involved a very large amount of trades. Rusnak executed a large number of transactions that involved buying and selling Japanese Yen and US Dollars. He appeared to offset the risk involved in these deals by taking out options contracts. This is a standard practice amongst currency traders and provides "insurance" in case markets move in a way not anticipated in the previous FX transactions.

Allegedly, Rusnak built up big bets that the Yen would strengthen against the Dollar. Instead, as the graph below shows, it has significantly weakened in the past 12 months.



The losses were quite significant, but they would have been offset by profits from the options deals. However, as it was discovered by AIB deplorably late, the options were never purchased. What happened was that the purchase orders were entered into the bank's system "artificially". That is, it was made to appear as if options contracts had been bought when, in fact, they had not.

Although the general mechanism of the fraud is clear, the investigation still has to clarify the precise sequence of events and discover whether there was any collusion, if any individuals personally profited from the fraud and why the internal controls failed. It has already been confirmed that AIB will not go bankrupt as a result of this fraud, as it is a retail bank with

sufficient capital to cover the incurred losses. However, over the past decade there have been only two other cases that have caused losses on such a similar grand scale.

Nick Leeson

The most famous “rogue trader” to date is Nick Leeson who caused the collapse of Barings Bank under debts totalling \$1.3 billion in 1995. Leeson was involved in unauthorised futures and options trading on the Singapore International Monetary Exchange and the Osaka Securities Exchange. He used a special account, bearing the number 88888 to conceal his losses. This elaborate deception was made possible due to the fact that as a cost-cutting measure Leeson operated both as a front-office trader and as a back-office settlement manager.

Suspicious were first aroused in 1994 when Baring's external auditors questioned the credit from [Spear, Leeds & Kellogg](#), a New York City-based securities trader, offsetting Leeson's losses. Leeson forged faxes from Spear Leeds & Kellogg, [Citibank](#) and one of his superiors in London reassured the auditors that the money was paid to Barings. The forged proof was accepted.

Leeson kept up the charade for more than two years while pulling in over \$1 million in wages and bonuses. In 1993, he got an extra \$195,000 for his exceptional performance and was on track to be rewarded a further \$689,000 for 1994. Underneath this generous remuneration, Leeson's losses were secretly escalating. He bet heavily on Tokyo's Nikkei stock index at the beginning of 1995. He bought and held on to Nikkei futures even after the January earthquake in Kobe. Over three months he bought more than 20,000 futures contracts worth about \$180,000 each in a vain attempt to move the market. Some three quarters of the \$1.3 billion that Leeson lost resulted from these trades. When it became impossible to conceal his fraud anymore, Leeson fled. Once caught, he was sentenced to six-and-half years in prison. Unable to cover the losses, Barings was sold to the Dutch bank ING - now called [ING Barings](#).

Yasuo Hamanaka

Even greater than this was the £1.8bn loss that the Japanese Conglomerate [Sumitomo](#) incurred due to Yasuo Hamanaka's unauthorized trading over a 10-year period. Hamanaka was apparently known as Mr. Five Percent because he and his team controlled at least that share of the world copper market. Hamanaka was given unusual autonomy within the Sumitomo organization and this lack of oversight allegedly allowed him to keep two sets of trading books, one reportedly showing big profits for Sumitomo in the buying and selling of copper and copper futures and options, and a secret account that recorded a dismal tale of billion-dollar losses.

Because Yasuo Hamanaka produced huge profits (at least on paper) he was not rotated into other jobs as most Sumitomo executives were. His books showed that his division had cash reserves far greater than they actually were and no one dared to look too closely at his transactions. Finally, it was the pressure of an internal investigation that led Hamanaka to bow to the

inevitable and confess. He revealed to his corporate bosses that he had been conducting unauthorized trades for the past 10 years in a vain attempt to cover up snowballing losses. He was sentenced for 8 years.

BUSINESS CONTINUITY PLANNING

It should always be the endeavor of an organization to avert any operational crises arising out of business disruptions and system failures, realizing however that operational risk element as such cannot altogether be eliminated in the business environment. Hence, business continuing planning needs to be in place at any point of time through an appropriate planning process.

Reserve bank of India has stated: “Business continuity planning (BCP) is a key pre-requisite for minimizing the adverse effect of one of the important areas of operational risk- business disruptions and system failures”.

BCP Methodology

Methodology implies the mode of accomplishing an objective. BCP may be achieved organization-wide if following methodology is adopted by a bank as advised by RBI.

- Identification of critical businesses and owned and shared resources with supporting functions (the BCP template shall include IT continuity plan template).
- Structured risk assessment based on comprehensive business impact analysis.
- Critical and tough assumptions in terms of disaster so that the framework would be exhaustive enough to address the most stressful situations.
- Identification of recovery point objective (RPO) for data loss for each of the critical systems and strategy to deal with such data loss.
- Alternative procedures during the time system are not available.
- Clearly documented and tested processes for shifting to secondary/backup systems and sites.
- Minimizing immediate damage and losses.
- Establishing management succession and emergency powers.
- Addressing HR issues and training aspects.

- Providing for the safety and well being of people in the branch or at the location where the disaster occurs.
- Use of external resources.

BASEL CONCEPT

From Basel I to Basel II

With the Basel Capital Accord of 1988, the Basel Committee on Banking Supervision pursued precisely these intentions as well as the ultimate objective of increasing the stability of financial markets. The original accord was based on "actual" banking risk (i.e. credit risk), for which banks were required to hold a minimum capital standard of 8% of the volume of outstanding loans (in the form of risk-weighted assets). In 1996, the accord saw comprehensive extensions to include regulations which accounted for market risk.

However, in the light of ongoing developments and events in the banking industry, the Basel Committee began revising the original accord in 1999 with the following objectives:

- To bring regulatory capital requirements closer to the actual risk profile of banks.
- To cover all essential banking risks with theoretically grounded, flexible and operable requirements which create incentives for advanced implementation and
- To allow banks to use in-house methods.

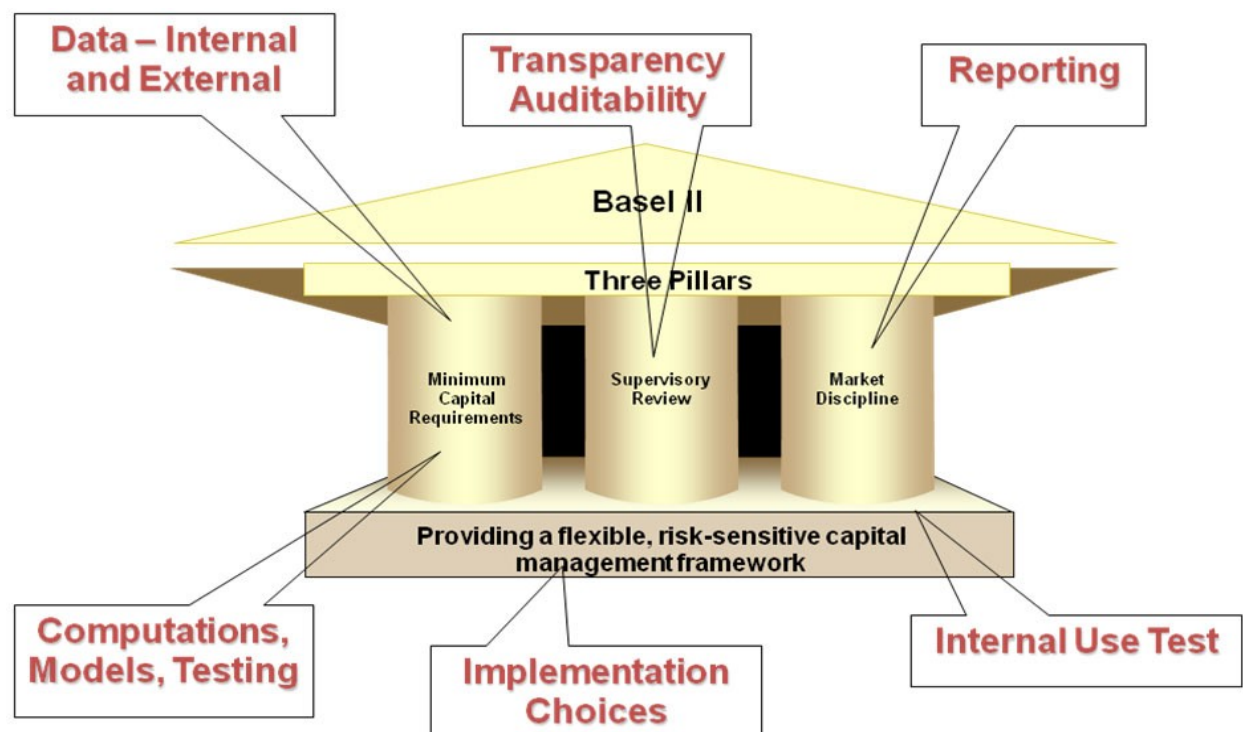
Given these demands and the large number of new developments in banking, the new regulatory capital requirements had to be more comprehensive and complex than the previous capital adequacy framework. However, if possible, the simplest approaches under the new requirements should not significantly exceed the current capital accord in terms of complexity, and above all they should be neutral in terms of capital requirements, at least on average.

The Basel II Concept

As experience has shown that risk-based capital resources alone cannot ensure the solvency of a bank and the stability of the overall banking system, an approach based on three pillars was chosen: Pillar 1 – Minimum capital requirements, Pillar 2 – Supervisory review process, and Pillar 3 – Market discipline. Thus the already existing instrument of minimum capital requirements, which has already proven to be effective, was developed further and complemented with the framework of a qualitative review process involving close contact between banks and supervisory authorities as well as extended disclosure requirements. The

philosophy behind this approach is based on synergies arising from the use of the three pillars, which should mutually enhance each other's efficacy.

The first pillar is concerned with the **minimum capital requirements** arising from credit risk, market risk and operational risk, each of which has to be calculated using an approach which is suitable and sufficient for the individual bank. For the sake of an evolutionary approach, both standardized methods and more refined measurement methods have been defined for each risk category, and the transition to using the latter methods is rewarded with lower capital requirements. This provides banks with an incentive to continue developing their risk management methods for the various risk categories.



The **supervisory review process**, the second pillar of the new capital adequacy framework, requires banking supervisory authorities to carry out qualitative reviews in order to ensure that the internal processes necessary for assessing the bank's specific risk situation and appropriate capital resources exist, function and undergo constant improvement in each bank.

The third pillar, **market discipline**, could also be referred to as "disclosure" as certain minimum effective disclosure requirements (i.e. rules for the publication of information such as a bank's risk profile, the adequacy of capital items, etc.) are a basic prerequisite for sound information standards among all market participants. This in turn allows market forces to take effect without obstructions, thus indicating the prevalence of market discipline. The new accord contains disclosure requirements and recommendations for various areas of banking operations, including the methods a bank uses to estimate its risks or how the bank determines its capital

adequacy (i.e. the relationship between equity and overall risk). The bulk of these disclosure requirements will apply to all banks, and more detailed requirements will be developed for approaches which are based on banks' internal methods and require supervisory approval.

PRINCIPLES OF OPERATIONAL RISK MANAGEMENT

Any activity or group of activities needs to be supported by and documented into a clear path of principles which are 'fundamental truth'. In risk management, the following founding set of principles dominates the entire operating environment:

- ❖ Close involvement of top level management in not only at the policy formulation stage, but also during the entire process of implementation, along with regular monitoring, subsequently.
- ❖ Severity and magnitude of risk must be documented, stating in clear terms the check points and safeguards to be put in place. It should also be ensured that these check points and safeguards operate consistently and effectively, besides being flexible.
- ❖ While segregating duties assigned to various personnel, clear lines of responsibilities should be drawn.
- ❖ Staff accountability must be clearly spelt out so that various risk segments are handled by various functionaries with full understanding and dedication, while also owning the responsibility for their actions.
- ❖ Besides identification of risk areas, it is absolutely essential that the identified risks are measured, monitored and controlled as per the needs and operating environment of the organization. Hence in the line with internal audit of financial accounts, there has to be a system of 'internal risk audit' in the organization that provides regular risk audit feedback.
- ❖ All the risk segments should operate in an integrated manner on an enterprise wide basis.

Basel Committee has evolved **Ten Principles** for effective management of operational risks by banks, with an eye on the need of clear lines of responsibility, segregation of duties, effective internal reporting, contingency planning, and above all, supervision of activities by the bank's board and senior management. These principles are listed below:

Principle: 1

“The board of directors should be aware of the major aspects of the bank’s operational risks as a distinct risk category that should be managed and it should approve and periodically review the bank’s operational risk framework. The framework should provide a firm- wide definition of operational risk and lay down the principles of how operational risk is to be identified, assessed, monitored and controlled/mitigated.”

Following aspects are important for complying with this principle:

- A. Operational risk must be recognized as a separate category of risk even though in some cases there may be an overlap of risk categories.
- B. Bank’s operational risk framework has to be chalked out covering inter alia, the following:
 - I. Main/ dominant constituents of operational risk factors, as derived from fraud analysis.
 - II. Bank’s appetite level and tolerance level for operational risk e.g. whether focus will be more on decentralization/centralization of authority and powers of staff managing the bank. Also, to a certain extent, risk in various segments of the bank’s operation may be accepted.
 - III. Bank’s privatization of operational risk retention and transfer, by way of insurance etc. e.g. whether fidelity insurance is to be taken for all categories of staff, whether all the assets are to be insured or not, etc.
 - IV. Firm-wide implication rather than activity/unit wise implication to be adopted.
 - V. Clear direction should be available at all levels with regard to modality of identification, assessment, monitoring and controlling/mitigating the risks.
- C. Bank’s risk profile should dictate the degree of formality and sophistication of its operational risk management.
- D. An appropriate management structure (under the overall supervision of board of directors) should be created laying down clear lines of responsibility, accountability and reporting. It should also be ensured that there is no conflict of interest between business lines and support functions.
- E. A periodical review system should be established.

Principle: 2

“The board of directors should ensure that the bank’s operational risk management framework is subject to effective and comprehensive internal audit by operationally independent, appropriately trained and competent staff. The internal audit function should not be directly responsible for operational risk management.”

The following aspects are important for complying with this principle:

- a. Operational risk framework covering operations, policies and procedures would have to be covered under internal audit program.
- b. Internal audit mechanism has to verify the effectiveness of bank’s operational risk management.
- c. The bank’s board, either directly or through an audit committee, should ensure that internal audit program is appropriate to the bank’s risk exposures.
- d. Appropriately trained and competent personnel should be entrusted with internal audit functions. They should have autonomy and independence within the framework of the bank’s organizational structure and should have any operational management responsibilities.

Principle: 3

“Senior management should have the responsibility of implementing the operational risk management framework approved by board of directors. The framework should be consistently implemented throughout the whole banking organization and all level of staff should understand their responsibilities with respect to operational risk management. Senior management should have the responsibility of developing policies, process and procedures for managing operational risk in all the banks.”

Following aspects are important in complying with this principle:

- a. Senior management would have to ensure bank-wide implementation of operational risk management (as approved by board). Senior management should have full control of the operational risk management strategy.
- b. To avoid significant gaps or overlaps in effective management of all categories of risks, the staff entrusted with managing operational risk should be encouraged to communicate effectively with those managing credit risk and market risk

- c. The bank's remuneration policies should be such that they do not encourage reward to staff members who deviate from policies, thereby weakening the bank's risk management process.

Principle: 4

“Banks should identify and assess the operational risk inherent in all material products, activities, processes and systems. Banks should also ensure that before new products, activities, processes and systems are introduced or undertaken, the operational risk inherent in them is subjected to adequate assessment procedures.”

Following aspects are important in complying with this principle:

- a. Operational risk identification is the basic requirement in effective management of operational risks. There are two recognized set of factors of such an identification process (1) Internal factors- Bank's structure, nature of activities, quality of human resources, organizational changes, employee turnover etc. (2) External factors- Changes in banking industry, regulatory policies, technological advances etc.
- b. Internationally recognized assessment tools of operational risk in a bank's activities are as given below:
 - ❖ Self risk assessment
 - ❖ Risk mapping
 - ❖ Use of statistic and/or metrics
 - ❖ Quantification

Principle: 5

“Banks should implement a process to regulatory monitor operational risk profiles and material exposure to losses. There should be regular reporting of pertinent information to senior management and the board of directors that supports the proactive support of operational risk”.

Following aspects are important in complying with this principle:

- a. Monitoring system for operational risk should be effective in quickly detecting and correcting deficiencies in the policies, processes and procedures so as to reduce the potential frequency and severity of events that are likely to generate loss.

- b. Early warning of future losses should be incorporated, which should be forward looking and should reflect potential sources of operational risk areas.
- c. Spotting potential risk areas demands a systemic and ongoing evaluation system.

Principle: 6

“Banks should have policies, processes and procedures to control and initiate material operational risk management. Banks should periodically review their risk limitations and control strategies and should adjust their operational risk profiles accordingly, using appropriate strategies in light of their overall risk appetite and profile.

Following aspects are important in complying with this principle:

- a. Material operational risks in a bank must be controlled and mitigated through appropriate policies, processes and policies.
- b. The bank’s strategies must be reviewed periodically, keeping in a view its overall risk appetite and profile.
- c. Risks such as natural disasters, which cannot be controlled and display low frequency-high severity characteristics, should be transferred to insurance companies with appropriate cover. However such transfer of risks should not create any legal risk.

Principle: 7

“Banks should have in place contingency and business continuity plans to ensure their ability to operate on ongoing basis and limit losses in the event of severe business disruption”.

Following aspects are important in complying with this principle:

- a. It is possible that due to sudden damage to the bank’s physical telecommunication or information technology (IT) infrastructure, the bank is unable to meet its business obligations, especially where disruption extends to the payment system.
- b. Depending on the bank’s size and complexity of its operations, it is necessary that appropriate disaster recovery and continuity plans are in place.
- c. A periodical review system relating to disaster recovery and business continuity plans must be established. In light of the banks past experience in dealing with disasters, necessary improvement should be undertaken.

Principle: 8

“Banking supervisors should require that all banks, regardless of size, have an effective framework in place to identify, assess, monitor and control/mitigate material operational risks as part of an overall approach to risk management”.

This principle specifies the functional role responsibilities of the regulatory banking authorities of each country. Pillar-2-Basel accord II supervisory review process is expected to look into each bank’s operational risk management framework. Where, as a result of such review, they conclude that risk policies of the bank post a threat to the safety and soundness of the bank, they may initiate corrective action.

Principle: 9

“Supervisors should conduct directly or indirectly, regular independent evaluation of a bank’s policies, procedures and practices related practices related to operational risks. Supervisors should ensure that there are appropriate mechanisms in place which allow them to remain apprised of development at banks.”

This principle demands supervisory action with regard to independent evaluation of a bank’s policies, procedure and practices relating to operational risk management.

The last principle, principle: 10

“Banks should make sufficient public disclosure to allow market participants to access their approach to operational risk management”. Recognizing the fact that the area of operational risk disclosure is not well established in banks in various countries, Basel committee feels that “timely and focused” disclosure, keeping in view size, risk profile and complexity of bank’s operations, would lead to enhance market discipline.

OPERATIONAL RISK UNDER BASEL II

The new accord contains a new capital requirement for operational risk. The capital accord of 1988 only required banks to set aside capital for credit risk, but the simultaneous coverage of other risks was certainly implied in those capital requirements. The main factors which influenced the decision to take these risks into account explicitly were the growing dependence of banking operations on IT systems, the propagation of electronic banking and especially the increasing complexity of business processes in banking.

In this context, operational risk is by nature very different from credit risk and market risk. Operational risk is far more difficult to capture because it is inherent to many activities and is often not taken consciously, but it is still inevitable – in fact, banks set aside approximately one fifth of their economic capital for operational risks. Concepts for delineating, quantifying and controlling operational risk are not nearly as well developed as in the other risk categories, but as recent events have shown, operational risks can be significant, and the resulting losses can even threaten a bank's existence.

For this reason, the Basel Committee on Banking Supervision decided to introduce capital requirements for operational risk and to offer three levels of approaches in this context.

- The Basic Indicator Approach
- The Standardized Approach
- Advance Measurement Approach

The Basic Indicator Approach (BIA)

Under the first and simplest approach, the basic indicator approach, the capital requirement is based on bank's gross operating income (GOI), equals to sum of net interest income and non-interest income (derived primarily from service fees and trading gains). The gross operating income of the bank measures its gross operating revenues and is roughly equivalent to the turnover of the industrial companies. It is therefore a measure of pure size, which provides no indication about the 'quality' of the company revenues.

The gross operating income is multiplied by a risk factor- known as Alpha (α) - which has been set by the Basel Committee at 15%. This figure is based on the data provided to the committee by a small number of banks that in 2000 already had operational risk measurement systems in place. While calculating 15% of the gross income as operational risk capital, on the basis of average over the previous three years, figures for any year in which annual gross income is negative or zero, should be excluded.

This approach is extremely simplified and imprecise, since the different levels of exposure to operational risk of the bank's various businesses, are not taken into consideration. Indeed, the Basel Committee considers it suitable only for small, relatively unsophisticated banks and affirms that "internationally active banks and banks with significant operational risk exposures are expected to use an approach that is more sophisticated than the basic indicator approach and that is appropriate for the risk profile of the institution.

The prescribed formula for computation:

Operational risk capital based on 15% gross income indicator is to be computed as per the following formula:

If K is the capital charge under basic indicator approach

α is the predetermined scaling factor (15%)

And GOI is the gross operating income by regulatory authority over previous three years

Then

$$K = \alpha \text{ GOI}$$

Therefore, if:

Average gross operating income over three years : Rs.1000 crores

Scaling Factors : 15%

Operational risk capital required : Rs. 150 crores

Practical Example: A practical example of computation of operational risk capital under basic indicator approach is discussed below.

Profit & Loss account shows the following position of income over the last three years.

(Rs. in crores)

	31.03.2009	31.03.2010	31.03.2011
Interest income	6800	7200	8000
Other income	1000	1400	2100
Total	7800	8600	10100
Interest expenses	4500	4900	5500
Balance	3300	3700	4600
Less profit on sale of investment	600	800	900
Less profit on the sale	20	10	5

of land, building and
other assets

Net Income	2680	2890	3695
------------	------	------	------

Note: Under basic indicator approach, extraordinary income/expenses are to be ignored. Hence, net profit on sale of investment and profit on the sale of land, building and other assets is deducted.

Computation:

Average of relative Income of last three years: 3088.33 crores.

15% of above: 463.25 crores.

Utility:

Since Basic Indicator Approach is complicated, it is widely used and is a convenient method of computation and in the case of BIA, gross income is chosen keeping in the view the following benefits:

- 'Income' is a realistic factor reflecting size of activities of a bank although it may not be a measure of its operational risk.
- It is conveniently usable.
- It can be verified by an external agency/auditor.
- It offers a consistent and comparable means (as compared to any other criteria) in all jurisdictions.
- It is counter-cyclical i.e. it is not correlated to swings in the business cycle.
- To begin with any system of computation of operational risk capital, this is most practical approach.

Drawbacks

- Operational risk exposure is very loosely connected with income- total business-operating expenditure may still be a better indicator.
- Quality of operational risk management between two banks with approximately same level of income cannot be assessed.

- Operational risk assessment, as such, being complicated, and effectiveness of such a simple method is very much in doubt. We may paraphrase the renowned scientist Einstein: **“A good framework should be simple but not simpler”**.

Standardized Approach (SA)

Under the standardized approach, the capital requirement is measured separately for the main business lines by multiplying their gross operating income by a specific risk factor, β , different for each business line. These eight business lines are given below:

- Corporate finance
- Trading & sales
- Retail banking
- Commercial banking
- Payment & settlement
- Agency services
- Asset management
- Retail brokerage

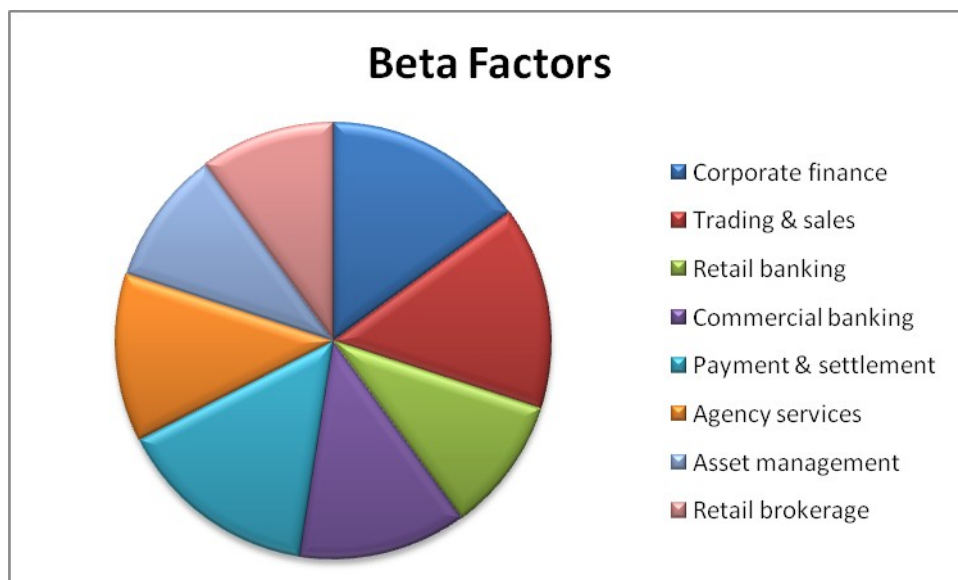
This approach thus captures, at least in part, the different levels of risk of the various business areas in which a bank operates. Consequently, it produces a larger capital requirement for banks that operate in intrinsically riskier sectors. The committee requires that all the operating income of the bank be associated with one and only one business lines among the eight business lines as indicated in the table. The mapping of the bank’s various activities to the different businesses must follow the scheme of the table and must also be clearly documented, subject to independent review, approved by board of directors under the responsibility of senior management.

Business lines and Beta Factors in the Standardized Approach:

No.	Business line	Beta factor
1.	Corporate finance	18%

2.	Trading & sales	18%
3.	Retail banking	12%
4.	Commercial banking	15%
5.	Payment & settlement	18%
6.	Agency services	15%
7.	Asset management	12%
8.	Retail brokerage	12%

The value of the β factors, again, must be multiplied by the gross operating income referring to the average for last three years. The gross operating income of one or more business lines may be negative, but total at the bank level must be positive (otherwise the capital requirement for the third year would be zero). As mentioned earlier, for each business line, the capital requirement is computed by multiplying the three-year average gross operating income by a specific beta factor. The Basel Committee fixed the Beta factors associated with the eight business lines, as they did for the α factor of the previous section.



For Example, the capital requirement for retail banking is equal to 12% of the average gross operating income recorded in the last three years by the retail banking business. The overall capital requirement of the bank is equal to sum of the requirements for the eight business lines. The gross operating income of a business line can be negative in one or more years, provided that the overall bank result is positive. Otherwise, in estimating the three year average, it is forced to zero.

Prescribed formula for computation:

The computation of operational risk capital with percentage of gross income on the basis of business line is to be made as per the formula given below:

If,

K = Capital charge under standardized approach

GI 1-8 = Annual gross income in a given year

B 1-8 = Specific percentage for each of the eight lines. Then

$$K = GI\ 1-8 \times \beta\ 1-8$$

The table below shows the computed values of operational risk capital considering a gross income of Rs. 1000 crores for each business line.

No.	If business line generating income in a year	Operational risk capital requirement would be
1.	Corporate finance Rs. 1000 crores	Rs 180/- crores (18%)
2.	Trading & sales Rs. 1000 crores	Rs. 180/- crores (18%)
3.	Retail banking Rs. 1000 crores	Rs. 120/- crores (12%)
4.	Commercial banking Rs. 1000 crores	Rs. 150/- crores (15%)
5.	Payment & settlement Rs. 1000 crores	Rs. 180/- crores (18%)
6.	Agency services Rs. 1000 crores	Rs. 150/- crores (15%)

7.	Asset management	Rs. 120/- crores (12%)
	Rs. 1000 crores	
8.	Retail brokerage	Rs. 120/- crores (12%)
	Rs. 1000 crores	

Thus, against a gross income of Rs. 8000 crores, the operational risk capital requirement would be Rs. 1200/- crores which averages to 15%.

Note that the choice of computing the bank's capital requirement as the sum of those for individual business lines implicitly assumes a perfect correlation among the various types of loss events. In practice, it is assumed that the losses connected to the operational risk of the various business lines do not tend to offset each other over time but instead tend to occur simultaneously. The bank is therefore required to have sufficient capital to cover all losses deriving from events that might reasonably occur jointly.

Comparing the standardized and basic indicator approaches, we note that the β factors may be greater or smaller than α : the latter, in fact, is equal to 15%, while the values of beta is between 12% (activity with low operational risk) and 18% (activity with high operational risk). In both the basic and standardized approaches, the basis for computing the capital requirement is gross operating income.

The requirements for adopting the standardized approach

- The regulatory authority of the country should be convinced that the board of directors and senior management are actively involved in the bank's operational risk management.
- Bank's operational risk management system must be 'conceptually sound' and implemented with integrity.
- Bank should have sufficient resources necessary for using the approach, control and audit aspects.
- Bank should have developed specific policies and criteria for mapping gross income for its business line as well as appropriate system of periodical review thereof.
- Bank operational risk management system must provide clear allocation of responsibilities of officials. Besides strategies relating to identification, measurement, monitoring and control, there must be an appropriate risk reporting system for operational risk exposure and material operational losses.

- The bank must have an appropriate system in place to track operational risk data including material losses, if any, of each business line.
- The bank must have techniques to provide ‘incentive’ towards enterprise-wide improvement of operational risk management.
- The bank must have appropriate procedure for promptly dealing with operational risk reports and other data/information.
- Documentation of operational risk management system must exist, so should an appropriate system for ensuring compliance with documented policy, procedure etc. and treatment for non-compliance issues.
- Both, the activities of business lines and operational risk management system of the bank, must be subject to validation and regular independent review of external auditors and/or regulatory authority of the country.

The process of mapping of the activity to the business lines

Activity Groups	Businesses	Business Lines	Business Units
Mergers and acquisitions, underwriting, privatizations, securitization, research, debt (govt. high yield), equity, IPOs, secondary private placements	Corporate Finance Municipal/Government finance Merchant Banking Advisory Services	Corporate Finance	Investment Banking
Fixed income, equity, foreign exchange, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage	Sales Marketing Proprietary positions Treasury	Trading & Sales	Investment Banking

Retail lending and deposits, banking services, trust and estates	Retail Banking	Retail Banking	Banking
Private lending, deposits, Banking Services, Trust and estates, investment advices	Private Banking	Retail Banking	Banking
Merchant/commercial/corporate cards, private labels and retail	Card Services	Retail Banking	Banking
Project finance, real estate, export finance, trade finance, factoring, leasing, lending, guarantees, bills of exchange	Commercial Banking	Commercial Banking	Banking
Payment and collections, funds transfers, clearing and settlement	External clients	Payment & settlement	
Escrow, depository receipts, securities lending (customers), corporate actions	Custody	Agency Services	
Issuer and payment agents	Corporate Agency Corporate Trust	Agency Services	
Pooled, segregated, retail, institutional, closed, open, private equity	Discretionary fund management	Asset Management	Others

Pooled, segregated, retail, institutional, closed, open	Non-discretionary fund management	Asset management	Others
Execution and full services	Retail Brokerage	Retail Brokerage	Others

Utility

- In the light of sophistication and technology driven banking operations world over, computation of operational risk capital on business-line basis is considered a risk sensitive method.
- It is aimed more towards risk assessment than risk quantification on an ongoing basis.
- Business lines are mapped in a mutually exclusive manner with different requirement of risk capital.
- Provision for external validation and review of external auditors and regulatory authorities in respect of bank's risk management system, business line mapping etc. ensures scientific computation of risk capital charge.
- The approach, while maintaining quality of computation, emphasizes qualification of risk capital based on business line allocation.
- Operational risk, as a 'compounded effect' varies from business line to business line. While corporate finance, trading and sales and payment and settlement functions are considered most risky from operational risk management angle, Retail banking, Asset management and Retail brokerage are considered 'least' risky, hence a varied percentage of risk capital requirement.
- Operational risk computation under this approach takes into account the gross income of a given year without any focus on the average of previous few years- hence it is more linked to risk manifestation of any bank.
- Since business line related operational risk capital is to be maintained, it provides the board of directors/senior management with opportunity to decide upon the focus or otherwise, on a particular line, keeping in the view the net profit each time.

Drawbacks

- Assumption that operational risk varies proportionately to gross income is erroneous. When trading income is negative there is no capital charge, although the business line is quite risky. Banks adopting standardized approach (thereby incurring additional cost) may not derive any additional benefit since eventually operational risk percentage works out to 15%.
- A bank's higher/lower quality of operational risk management will not be reflected under this approach as it is not more risk sensitive than basic indicator approach.

Distinction between Basic indicator approach and standardized approach:

Basic Indicator Approach	The Standardized Approach
1) Operational risk capital charge is on the basis of a bank's overall gross income on entity concept- without any cognizance of business line source of income.	1) Operational risk capital charge is computed on the basis of gross income of each business line of the bank.
2) No need for any business line mapping as risk capital has no connection with this same.	2) Business line mapping must be undertaken as prescribed under Basel Accord II.
3) No distinction is made between banks with high risk business lines and low risk business lines.	3) Lower capital charge provision exists in low risk category business lines e.g. asset management (12%) as compared to high risk business line (e.g. corporate finance 18%).
4) No qualifying criterion is fixed- hence the regulatory authority has no scope to use the tool for examining the quality of operational risk management in the bank.	4) Qualifying criteria act as a useful lever to encourage better operational risk management in the banks.
5) Since no business line separation exists, specific business line	5) Business line managers have to own operational risk responsibility arising in

management responsibility cannot be fixed.	their activities.
6) This is purely ‘quality focused’ operational risk capital computation on entity basis.	6) This is both quality and quantity focused in view of business line segmentation.
7) This approach does not provide incentive for ‘cherry-picking’ since entity level income is base of computation in capital charge.	7) This approach contains an element of incentive for cherry picking in the view of varying % of the income considered for computation of capital charge

Advanced Measurement Approach (AMA)

The third approach actually consists of a variety of possible methodologies for which the Basel Accord only sets some minimum requirements. These “advanced measurement approaches” are basically the internal models developed by individual banks: in other words, a bank that has developed a model for measuring operational risk that enables it to determine its economic capital, can use it also to determine its minimum capital requirement, subject to some qualitative and quantitative conditions.

The Basel Committee thus recognizes the possibility that banks use their internal estimates of future operational risk losses to quantify their capital requirement, as it already occurs for market risks. In doing so, the committee leaves each bank, wishing to adopt an advanced approach, free to choose its own methodology and imposes no particular model.

The Basel Committee mentioned three possible approaches to estimating operational risk, on which banks could base their internal models:

- The Internal Measurement Approach
- The Loss Distribution Approach
- The Scorecard Approach

They were not included in the final version of the agreement but still provide a good example of what the supervisory authorities expect from banks.

The Internal Measurement approach required that the activities of the bank be segmented into predefined business lines and a range of possible risky events be identified. For each business

line/event category intersection, the supervisory authority would identify a risk exposure indicator that reflected the size of the bank's activity, while the bank would estimate the risk parameters (PE, probability of the event, and LGE, loss given event). The product of three parameters (EI, PE and LGE) would represent the expected loss, while unexpected loss would be estimated as the product of expected loss times a factor 'Gamma' defined for each business line/event category intersection, based on the skew and kurtosis of the relative distribution of losses.

The Loss Distribution approach required banks to estimate the entire loss probability distribution for each business line and 'cut' it at the desired percentile. More precisely, for each business line they had to estimate the distributions of the number of losses and the "loss given event". The total capital requirement could be less than the sum of capital requirements on the individual business lines, if the bank was able to demonstrate the imperfect correlation among the various loss classes.

The Scorecard approach required each bank to determine the total capital allocated to operational risk and then assign it to the individual business lines based on their relative risk profile. This profile was determined by means of 'scorecards' reporting a number of indicators, to be as objective as possible, of the intrinsic riskiness of the business line and the effectiveness of the control system in place for each of them.

The requirements for adopting the advanced approaches

The specific approval of regulatory authority of concerned country is to be obtained who may examine following aspects of the bank wishing to adopt the approach:

A. Qualitative Standards

- ✓ The bank must have an independent operational risk functional framework responsible for the design and implementation of operational risk management that provides an appropriate control and reporting system.
- ✓ The bank internal operational risk system must operate in such a manner that internal capital allocation and risk analysis is appropriately made and that it provides incentives for improved operational risk management.
- ✓ The bank must have a proper system in place to initiate appropriate action based on operational risk report.
- ✓ Compliance of operating with documented operational risk system must be checked on a regular basis and non compliance issues should be suitably dealt with.

- ✓ There must be an agreement to facilitate internal and/or external auditors performing regular review of operational risk management process and system are transparent and accessible.

B. Quantitative Standards

- ✓ The bank must demonstrate that its approach captures potentially serve ‘tail’ events.
- ✓ The bank must maintain rigorous procedures for operational risk model development and independent model validation for estimating potential operational losses.
- ✓ The bank must satisfy the regulatory authority that it measures expected loss and unexpected loss in operational risk.
- ✓ The bank’s risk measurement system should be sufficiently ‘granular’.
- ✓ The bank must have a validation system in connection with its corrective actions, using appropriate qualitative and quantitative techniques.
- ✓ The bank should have a credible, well documented and verifiable approach in its operational risk measurement system.
- ✓ Use of internal data, external data, scenario analysis and business environment and internal control factors etc. by the bank must meet regulatory standards.

Main categories of operational risk events

Event type category	Definition	Categories	Activity examples
Internal fraud	Losses due to act of a type intended to defraud, misappropriate property, the law or company policy excluding diversity/discrimination	Unauthorized activity	Transactions or reported (intentional) Transaction type unauthorized (monetary loss) mismarking of position (intentional)

	events which involves at least one internal party	Theft and fraud	Fraud/credit fraud/ worthless deposits Theft/extortion/embezzlement/robbery Misappropriation of assets Malicious destruction of assets Forgery Check kitting Smuggling Bribes
External fraud	Losses due to acts of a type intended to defraud, misappropriate property by a third party	Theft and fraud	Theft/robbery forgery check kitting
		System security	Hacking damage Theft of information
Employment practices and workplace Safety	Losses arising from acts inconsistent with employment, health or safety laws or agreements from payment of personal injury claims or from diversity/discrimination events	Employee relations	Compensation benefit termination issues Organized labor activity
		Safe environment	General liability Employee health & safety rules events Worker compensation All discrimination type
Clients products & business practices	Losses arising from an unintentional or negligent failure to meet a professional obligation to specific clients or from the	Suitability, disclosure & fiduciary	Fiduciary breaches/ guideline violations Suitability/disclosure issues Aggressive sales

	nature or design of the product		Account churning Misuse of confidential information
		Improper business or market practices	Antitrust improper trade/market practices Market manipulation Unlicensed activity Money laundering
		Product flaws	Product defects (unauthorized, etc.)
		Selection, Sponsorship & Exposure	Failure to investigate client per guidelines exceeding client exposure limits
Damage to physical assets	Losses arising from loss or damage to physical assets from natural disaster or other events.	Disaster and other events	Natural disaster losses Human losses from external sources (terrorism vandalism)
Business disruption and system failures	Losses arising from disruption of business or system failure	Systems	Hardware software Telecommunications utility outage/disruption

BIBLIOGRAPHY

- Karen A. Horcher (2005) Essential of Financial Risk Management, New Jersey: John Wiley & Sons, Inc.

[available at http://books.google.com/books?id=81KtfkCBfvcC&pg=PP5&source=gbs_selected_pages&cad=3#v=onepage&q&f=false]

- Philippe Jorion (2003) Financial Risk Manager Handbook, New Jersey, John Wiley & Sons, Inc

[available at <http://www.oilfieldtrash.com/custom/php/files/1252690342Financial%20Risk%20Manager%20Handbook%202nd%20Ed.pdf>]

- K S Bagchi (2008) Operational Risk Management, New Delhi, Jaico Publishing House.
- R Andrea & S Andrea (2007) Risk Measurement & Shareholder's Value in Banking, New Jersey, John Wiley & Sons, Inc
- Secondary Data from Company records.
- BCBS (1998). Operational Risk Management [www. bis.org](http://www.bis.org).
- BCBS (2004). Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework. Bank for International Settlements, Basel. [www. bis.org](http://www.bis.org).
- BCBS (2006). Observed range of practice in key elements of Advanced Measurement Approaches (AMA). [www. bis.org](http://www.bis.org).
- BIS August (2004). Implementation of the new capital adequacy framework in non-Basel Committee member countries. [www. bis.org](http://www.bis.org)

- Buchelt, R. and Unteregger, S. (2004). Cultural risk and risk culture: operational risk after Basel II. Financial Stability Report 6.
http://www.oenb.at/en/img/fsr_06_cultural_risk_tcm16-9495.pdf.
 - Moosa, I.A. (2007). Misconceptions about operational risk. Journal of Operational Risk, Vol. 1, No. 4, pp. 97-104.
 - RBI (2005). Reserve Bank of India Guidance Note on Operational Risk Management dated October 15, 2005. www.rbi.org.in.
 - RBI (2006). Report on Trend and Progress of Banking in India: 2005-06. www.rbi.org.in.
 - RBI (2007a). Prudential Guidelines on Capital Adequacy and Market Discipline-implementation of the New Capital Adequacy Framework: Reserve Bank of India circular dated April 27, 2007. www.rbi.org.in.
 - RBI (2007b). Indian Financial Sector Reforms: Address by V Leeladhar Deputy Governor Reserve Bank of India at the Annual Washington Conference of the Institute of International Bankers on March 5, 2007 www.rbi.org.in.
 - RBI (2007c). Special Features of Financial Sector Reforms in India: Address by Shyamala Gopinath Deputy Governor Reserve Bank of India at the 18th Annual National Conference of Forex Association of India on April 6, 2007. www.rbi.org.in.
-

ANNEXURE

FROM BRANCH TO RO

-----BRANCH/OFFICE
INCIDENT REPORTING

Ref No. : _____ Date of Report : _____

1	a) Date of Occurrence		
	b) Date of Detection		
2	Specific details of the incident/Event-		
	Enclose separate annexure in case place is not sufficient		
3	*Business unit	4. *Category of Event:	
	Level 1	Level 1	
	Level 2	Level 2	
	Level 3	Level 3	
* Not to be filled in by the branches until further instructions. ROs while scrutinising the information received should fill up column 3 & 4 as per guidelines given in Annexure 4b.			
5	Product(s) Affected	Deposits : Savings <input type="checkbox"/> Current <input type="checkbox"/> Term Deposit <input type="checkbox"/>	
		Advances : Corporate/ Commercial <input type="checkbox"/> Retail <input type="checkbox"/>	
		Others : Remittances <input type="checkbox"/> Agency services <input type="checkbox"/>	
6	Process(s) Affected	7. Cause/es of Events	8. Procedure /Control violated
9	How incident / Event identified		
10	Identified by whom		
11		Yes / No (If yes, whether partially / fully)	

	Whether the functioning /operating Of the branch /office affected on account of incident /event	
12	Amount of Loss: Expected Loss	
	Actual Loss	
	* Recovery of loss	
* Branch need not wait for recovery of loss and must report the loss event immediately.		
13 Frequency of incident		
14	Whether such incident happened in the past	
15	If yes, date of incident	
16	Whether incident is related to Operational Risk in Non-Credit area?	Yes <input type="checkbox"/> No <input type="checkbox"/>
17	Whether incident is related to Operational Risk in Credit area.	Yes <input type="checkbox"/> No <input type="checkbox"/>

19.	Failure of system/software/ hardware due to which customer services are affected		
20.	Internal fraud done by staff members resulting into losses to the bank/ customers related to non credit area		
21.	External Fraud done by third party causing losses to the bank (forgery of signature, obtaining of duplicate passbook, loose cheque book, forged DD/PO etc.)		
22.	Leakage of income other than credit area resulting in loss to the bank (e.g. excess intt paid)		
23.	Write off if any under impersonal account		
24.	Penalty if any imposed by the government/ statutory/ regulatory authority		
25.	Loss to Bank's property / OFF on account of fire, flood, natural calamities or due to not obtaining AMC		
26.	Penalty/ losses suffered by the bank on account of losing court case under non credit area		
27.	Non-compliance of KYC norms		
28.	Non-compliance of AML act		
29.	Violation of IRAC guidelines		
30.	Violation of Lenders Liability Code		
31.	Violation of Fair Practices Code		
32.	Unfair practices in aggressive marketing		
33.	Misuse of confidential information		
34.	Violation of SEBI, FEMA, RBI, Bank's guidelines		

35.	Un-authorized persons accessing our system		
36.	Non-adherence to password secrecy		
37.	ATM cash not tallying with books		
38.	Alarm system not provided / not operational		
39.	Misappropriation of amount deposited by customers in loan / deposit account		
40.	Subsidies under Govt. sponsored schemes misappropriated / embezzled		
41.	Bribes / kickbacks		

42.	Exceptional transaction list not being supervised		
43.	Down time due to non-availability of connectivity or electricity		
44.	Loss due to delay / mistake in carrying out Demat operations		
45.	Loss of instruments in transit		
46.	Exchange loss due to delayed / wrong / non-reporting of forex transactions		
47.	Loss due to failure in scrutinizing and pointing out deficiencies in Export / Import Bills		
48.	Outward forex remittance made without debiting customer's account		
49.	Opening of LC / issuing LG without making entries in Bank books		
50.	Loss due to delay in lodgement of cheques in clearing		
51.	Loss due to wrongful return of customer's cheque		
52.	Loss due to non-compliance of Standing Instructions		
53.	Short Recovery/ Non recovery of interest / penal interest /any charges and remaining un-recovered		
54.	Non presentment of bill in time		

If the answer to above parameters is 'yes' then branch should submit the detailed information in annexure 1.

INCIDENCE UNDER OPERATIONAL RISK IN CREDIT AREA

Sl No	Parameters	Response of the branch/region	
		Yes	No
1.	Account turned as NPA during the quarter due to calling <ul style="list-style-type: none">➤ Non adherence to the guidelines on due diligence of customer➤ Improper assessment of credit limits➤ Not obtaining required security documents➤ Sanctioning credit limits beyond delegated authority without getting it ratified➤ Internal fraud or external fraud		
2.	Submission of forged documents in respect of prime/ collateral security		
3.	Losses on account of un-insured / underinsured securities charged to the Bank		
4.	Penalty/ loss suffered by the bank on account of losing the court case		
5.	Loss due to Non-scrutiny of Willful defaulters' list, RBI caution list, SAL		
6.	Rejection of ECGC claim due to non-adherence of norms		

If the answer to above parameters is 'yes' then branch should submit the detailed information in annexure 1.

Bank's activities are divided into 8 business lines from BL1 to BL8 as indicated below.

Business Lines		Examples / Activity Groups
Code	Coverage	
Level 1	Level 2	
Corporate Finance BL 1	Corporate Finance	Mergers and Acquisitions, Underwriting, Privatisations, Securitisation, Research, Debt (Government, High Yield) Equity, Syndications, IPO, Secondary Private Placements
	Municipal / Government Finance	
	Merchant Banking Advisory Services	
Trading & Sales BL 2	Sales	Fixed income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerages, debt, prime brokerage
	Market Making	
	Proprietary Positions	
	Treasury	
Retail Banking BL 3	Retail Banking	Retail lending and deposits, banking services, trust and estates
	Private Banking	Private lending and deposits, banking services, trust and estates, investment advice
	Card Services	Merchant / Commercial / Corporate cards, private labels and retail
Commercial Banking BL 4	Commercial Banking	Project Finance, real estate, export finance, trade finance, factoring, leasing, lendings, guarantees, bills of exchange
Payment and Settlement BL 5	External Clients	Payments and collections, funds transfer, clearing and settlement
Agency Services BL 6	Custody	Escrow, Depository Receipts, Securities lending (Customers) Corporate actions
	Corporate Agency	Issuer and paying agents
	Corporate Trust	
Asset Management BL 7	Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open, private equity
	Non-Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open
Retail Brokerage BL 8	Retail Brokerage	Execution and full service

EFFECT (IMPACT) OF LOSS

Explanation for reporting in column no. 20 of the Statement on Operational Loss Data collection as per Annexure-4.

LEVEL 1	LEVEL 2
Write downs (Direct reduction in value of assets)	Assets stolen (other than physical assets)
	Internal/External Fraud
	Unauthorized Activity
	Market loss arising as a result of operational events
	Credit loss arising as a result of operational events
	Other write off
Loss of recourse (Payments or disbursements made to wrong parties and not recovered)	Other (specify head/name)
	Irrecoverable funds
Restitution (Payment to clients of principal and/or interest by way of restitution, or the cost of any other form of compensation paid to clients)	Others (specify head/name)
	Compensation/Restitution
	Accounting adjustment
Legal liability due to operational risk- Judgements, Settlements and other Legal Entity	Others (specify head/name)
	Legal costs
	Damages awarded
	Loss of contract/transaction
Regulatory and compliance including taxation	Others (specify head/name)
	Regulatory/statutory fines
	Penalties charged
Loss/damage of assets (Direct reduction in value of physical assets)	Others (specify head/name)
	Assets damaged due to negligence
	Assets damaged due to accident
	Assets damaged due to fire
	Assets damaged due to disaster
	Others (specify head/name)

