

## Basel II and its Bastion: A Trail Towards Proficient Banking Structure in India

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Banks are the vertebrae of every financial system. They facilitate in enhancing resonance within the economy by pumping lifeblood in form of glitzy gamut of financial services. As per the recent studies conducted by Economic Times, amidst the changing scenario India will outpace the developed economies as Canada, Spain and Hong Kong by 2017, provided India is able to maintain its development pace which is not possible without efficient Banking System. Prime focus of the paper is to study the impact of implementation of Basel II and its three tier architecture on the performance and efficiency of Indian banks. As adoption of Basel II by Indian banks upto 2010 is topical and blistering, this theme has been chosen for further exploration.

**Key Words:** Basel Accord, Risk Management, ERM, Chi-square.

Banking is an art as well as science of measuring and managing risk in loaning and outlaying activities which aims on superfluous returns, corresponding with discernment involved in investment. As the banks world over are highly leveraged entities, their failure will cause noteworthy anguish to the depositors and deprive borrowers of loan funds which are generally less expensive and scarce with competing claimants.

The oil crisis of 1970s ended an orderly world of global banking built after long negotiations in Breton Woods at the end of World War II. The growth and progress in global funds flow that pursued the oil prices hike changed, for ever, the face of international finance and banking. In the 1980s, three powerful factors accelerated the pace of change in global banking- Deregulation, Technological innovation & Globalization. These further eroded the traditional role of banks leading to the propagation of non-banking financial institutions, intensified competition among financial intermediaries and condensed their profit margins.

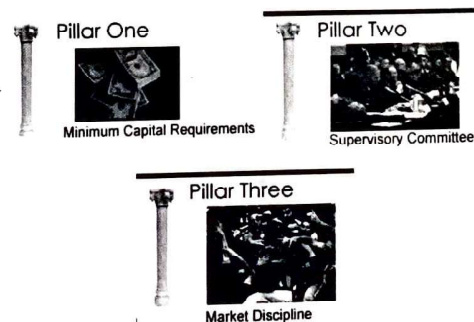
The new Basel Capital Accord seeks to fine tune the basic substance of the earlier pact to create a degree of homogeneity among all banking systems in the world in terms of adherence to prudential norms. To enable this, it has careworned three mutually underpinned pillars, which together are to increase the safety and soundness of the financial system. The basic design is to implement a more risk susceptible and flexible approach to bank capital requirements (Pillar 1) which gives positive enticement for banks to pursue more sophisticated and effective risk management techniques. At the

same time, the aim is to align supervisory review (Pillar 2) more closely with the way in which banks manage their risks, including heartening the use and further development of internal risk and capital management systems. In this process, the level of transparency and disclosures is to increase radically (pillar 3).

### Principles of Governance in Banks

The significance of banks to the national wealth is accentuated by the fact that banking is sagaciously a synchronized industry and that banks have access to government safety nets. Imperative substance is consequently laid down on banks to resort to sturdy corporate governance practices. The corporate governance issue in banks embraces effective risk management and protection of the interest of various stakeholders including depositors. The second pillar of Basel II focuses on supervisory review process and its role in ensuring high standards of corporate governance. Supervisors are expected to ponder up how well banks access their capital needs relative to their risks and adjudicate where appropriate. Analyzing the framework of Basel II, it comprises of three pillars:

### Three Pillars of Basel II



Source: <http://www.basel-ii-risk.com/Basel-II/Basel-Three-Pillars/index.htm>

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- Pillar I sketches the minimum capital requirements which organization is required to congregate and swathe credit, market and operational risk.
- The rules under Pillar II craft a new supervisory review process under which it is required by financial institutions to frame their personal in-house procedures for assessing their capital requirements and their own norms for appointing overseers to appraise an institution's by and large risk profile, an eventually to ensure that they safeguard passable capital.
- The prime focus of Pillar III is to perk up market discipline by imposing firms to publicize significant details of their risk management framework and capital management.

### India's Preparedness for Basel II

As surveyed by (FICCI) Federation of Chambers Commerce and Industry it was observed that there are many grey areas in the path to Basel II, such as low computerization level, inappropriate credit rating mechanism, deficiency of a strong MIS and lack of trained and qualified staff.

As an ingredient of the financial transformation initiated since 1992, Reserve Bank of India brought the financial system in contour with Basel I norms for capital adequacy and prudential norms. The silky and fast manner in which it was done brought out the instinctive potency of the banking system. Primarily the focus was on credit risk. Consequently, the RBI prepared banks to grant for market risks for certain items including government and approved securities, bonds and debentures of financial institutions and state government surefired advances in default. An investment fluctuation reserve has also been set up on the tradable securities.

Maximum risk weights have been allocated for open positions in gold and foreign exchange. Banks in India have also been asked to make stipulation for net funded country exposures. Banks have already been making additional provisions so as to meet the requirement when the time for "past due" for pigeonholing inferior accounts is reduced to 90 days from the present 180 days in the impending years.

Coupled with this central bank stated that Basel II should be applicable only to those banks that are "internationally active" with 20 percent of the business from foreign operation. While making its

comments on practical problems faced by Indian banks, The Economic Times in an article titled 'Moving In Tandem' observed that out of 105 banks in the country with over 55,000 branches, majority of the public sector banks are deficient in data due to late computerization. Thus, at the preliminary level of execution, this will involve huge scale IT hoards. Prerequisite is unsoiled and steadfast data that is accountable. The primary area of the accord that could aggravate confrontation concerns, systematic risk attributed to "under convergence" and "procyclical lending".

The very aspect of capital sufficiency has always been regarded as a trait of potency in the Indian Financial System. A capital to risk-weighted assets system was introduced for banks in India since April 1992, in consistency with the international standards, which called for the banks to achieve 8 percent capital to risk-weighted assets ratio. This capital was hypothesized to be made up of Tier I & Tier II capital. In an exploration that was meant to see the position of Indian Banks to implement Basel II norms, it was found that in the year 1999, only 26 of the Indian Banks were competent to achieve the target level of CRAR, & in the year 2001, 25 out of 27 public sector banks abided with minimum level of CRAR.

For Indian banks, what is of instantaneous relevance is the credit risk, for the appraisal of which the new norms suggest two ways, namely rating by outside agencies and banks own in-house rating. Of the two, the former is laddered with too many reservations. For one thing, there may not be enough competent rating agencies to meet the demands of the banks. Besides, such ratings can evolve their own credit rating systems even if such exercises take some time to develop.

Notwithstanding its challenge, Basel II norms provide a judicious opportunity for Indian banks to raise their standards of banking practices to international echelon. However, in order to overburden the system, Reserve Bank of India would do sound to adopt a steady loom.

### Impediments in the Path of Basel II Implementation

Indian Banks have to overtake many crossroads so as to implement Basel II successfully. But once the target is achieved Indian Banking System will definitely turn out as more sound and subtle. The crucial areas which need to be taken care of by Indian banks can be traced as under mentioned:

IT set-up As switching over to developed versions is the need of the hour so as to be in tune with the world, it is very much required in banking industry also for which banks have to computerize all its branches and have to be equipped with latest and advanced software infrastructure .This can facilitate in smooth and efficient information flow between head quarters, branches and customers (covering both rural and urban areas).

The Big Spenders	
Organization	IT Spend (in Rs crore)
State Bank of India	400
ICICI Bank	400
HDFC Bank	250
Punjab National Bank	180
Life Insurance Corporation	150
Central Bank	150
Allahabad Bank	120
Vijaya Bank	120
Bank of India	100
Indian Bank	98
State Bank of Mysore	90
Syndicate Bank	70
Indian Overseas Bank	61
UTI Bank	60
National Insurance	60
Bank of Maharashtra	50
United Bank of India	40
UCO Bank	40
Oriental Bank of Commerce	30
Birla Sun Life Insurance	21
Max New York Life Insurance	20
ING Life Insurance	20
DQ	Estimates
<p><b>Note:</b> The list is not comprehensive, as it does not include foreign banks Standard Chartered, HSBC and Citibank with large operations in India as well as major PSU banks like Bank of Baroda. Also missing from the list are large co-operative banks like Saraswat Bank as well as the two major bourses, BSE and NSE.</p>	

Source: [http://dqindia.ciol.com/content/DQTop20\\_2006/employers06/2006/106090602.asp](http://dqindia.ciol.com/content/DQTop20_2006/employers06/2006/106090602.asp)

**Data Administration** Collection of the data for last 3 to 4 years which is the requirement for confirming to the provisions of Basel II is another

difficult task. As adoption of computerization mechanism was very late by Indian banks, still many Indian banks are following indolent data maintenance mechanism and reprehensible management practices.

**Perils of Supervision resources** If one looks on to Asia pacific region, as the experts opine there is dearth of risk management expertise. This again will prove as an encumbrance in laying down regulations for framework of novel capital pact.

**Communication fissure** Looking towards the current scenario, it becomes important for banks to equip themselves with risk mitigating tools and lay down an efficient amalgamation set up between business, risk managers and IT infrastructure.

**Massive Outlay** Implementation of Basel II requires huge investment of about \$50-70 million so as to revamp the entire infrastructure according to the need of the time.

### The Map to Basel II Road

- Initially bank has to undergo deep gap analysis of bank preparedness for data resources, IT and systems, and see what is available & what is required.
- Next step is to come up with a devise and architecture pertaining to risk management.
- It has to prepare a robust implementation plan (cover cycles right from regulation and certification to validation)
- Finally, internal capabilities in the bank are to be identified.

### Research Methodology

In this part an attempt has been made to establish correlation between implementation of Basel II and increase in bank's profitability figures.

### Hypothesis

The study takes alternate hypothesis that adoption of Basel II norms enhances profitability and customer satisfaction in banks.

### Sample

For proving the hypothesis five Indian banks which have adopted and other five which have not



adopted Basel II significantly are taken for comparative analysis on profitability figures:

- Among banks which have adopted Basel II completely or significantly: SBI, ICICI, HDFC, BOI and PNB are taken as sample.
- Among banks which have not adopted Basel II significantly: Andhra Bank, Canara Bank, Syndicate Bank, Indian Bank, Oriental Bank of Commerce.

**Tools**

- Profit Before Tax for last four years is undertaken for assessing performance in terms of profitability figures.
- Ranking of banks in different customer satisfaction surveys is undertaken for finding out customer satisfaction with reference to banking services.

**Test Applied**

Chi square test is applied to determine association of two variables: adoption of Basel II and Increase in profitability of banks. Increase in profitability again is segregated into more than 50% profit rise and less than 50% profit rise.

**Empirical Analysis**

For the exploration rationale Profit Before Tax of ten Banks in the sample are studied for consecutive 4 years from Mar 06 to Mar 09. Thereafter fluctuations in the profit figures of five banks which have adopted Basel II (Appendix#1) & five other banks which have not adopted Basel II (Appendix#2) are observed & inference regarding association between variables is drawn with the help of Chi square test.

*Application of Chi square test for finding out association between variables.*

**Observed Values**

	Profit increase > 50% in succeeding years	Profit increase < 50% In succeeding years	Total
Banks those have adopted Basel II	3	2	5
Banks those have not adopted Basel II	1	4	5
	4	6	10

**Expectation of AB = (A) \* (B)/N**

	Profit increase > 50%:B	Profit increase < 50%:b	Total
Banks those have adopted Basel II =A	(AB)2	(Ab) 3	5
Banks those have not adopted Basel II =a	(aB) 2	(ab) 3	5
	4	6	10 (N)

**Calculation of Chi-Square**

Group	Observed	Expected	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> / E
AB	3	2	1	1	.5
Ab	2	3	-1	1	.33
aB	1	2	-1	1	.5
ab	4	3	1	1	.33

*Degree Of Freedom = (r-1) (c-1) = 1*

*Level Of Significance = 5%*

*Table Value = 3.841*

*Calculated Value = 1.66*

As table/critical value is more than calculated value, hence finally alternate hypothesis is accepted and inference is drawn that banks that have adopted Basel II norms and have started practicing CG and appropriate Risk Management in true sense have derived rich results in terms of increased profitability.

### Best Banks in terms of customer satisfaction

For finding out best banks in terms of customer satisfaction, ratings and survey of different agencies is taken with respect to customer preferences (Appendix#3). As it can be revealed through ratings under different customer surveys done regarding preference of banks that banks that have adopted Basel II and are part of the sample for this study such as SBI, ICICI, HDFC, and BOI enjoy greater customer satisfaction. Hence it can be concluded that Basel II adoption enhances customer satisfaction.

### Conclusion

Adoption of Basel II convention will help the Indian banks to compete on a global basis. Banks should acquire the necessary skills and technologies to put in consign the new composite system. As Indian banks have adopted the Basel I norms successfully, it can be hoped that they will implement the Basel II norms without much aggravation. Imperative here is stipulation of sufficient liquidity.

Due to deficiency of data, Indian banks need huge investments in information technology (IT) to implement the New Basel Accord. They should consider the amalgamation of the Basel II solution with their obtainable technical infrastructure. Most of the Indian banks are not internationally active banks and hence, may find that the new norms are too scrupulous.

With the international banking being the array of the time, risk associated to bank has also augmented and need for spiraling the supervisory review process and market discipline has become the altercation of the day. Basel II, bearing the pillars of capital adequacy norms measured in stipulations of risks, supervisory review process by regulators and market discipline on the part of the players cannot bring the best outcome without superior

corporate governance as indicated by the Basel Accord II. It requires rigorous and consistent supervision which in turn can fetch the best results if accommodated with the solutions for the above constraints.

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## Appendices

### Appendix#1

#### *Profit Figures of Banks that have adopted Basel II*

##### 1) State Bank of India

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	14,736.06	11,184.25	8,180.32	7,250.98
% increase in profit	31.76%	36.72%	12.82%	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030001>

##### 2) ICICI Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	5,059.96	5,194.08	3,557.95	3,112.17
% increase in profit	-2.58%	46%	14.32 %	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030056>

##### 3) HDFC Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	3,568.97	3,575.05	2,395.10	1,253.54
% increase in profit	-.17%	49.3%	91.1%	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030055>

##### 4) Bank of India

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	4252.09	2641.52	1519.82	940.39
% increase in profit	60.97%	73.80%	61.16%	

Source: <http://www.bankofindia.com/pressrelease.aspx>

##### 5) Punjab National Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	5,138.29	3,523.85	2,341.96	1,742.12
% increase in profit	45.82%	50.5%	34.43%	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030016>

### Appendix#2

#### *Profit Figures of Banks that have not adopted Basel II*

##### 1) Andhra Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	935.60	945.87	776.66	596.84
% increase in profit	-1.9%	21.79%	30.13%	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030021>

## 2) Canara Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	2,655.59	1,945.29	1,879.51	1,605.88
% increase in profit	36.51%	3.5%	17.04%	

Source: <http://money.rediff.com/money/jsp/cashflow.jsp?companyCode=14030061>

## 3) Syndicate Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	1,166.33	1,111.69	945.71	758.89
% increase in profit	4.9%	17.55%	24.61%	

Source: [http://money.rediff.com/money/jsp/p\\_1.jsp?companyCode=14030048](http://money.rediff.com/money/jsp/p_1.jsp?companyCode=14030048)

## 4) Indian Bank

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	2,012.45	1,195.75	1,163.14	665.11
% increase in profit	68.30%	2.8%	74.88%	

Source: [http://money.rediff.com/money/jsp/p\\_1.jsp?companyCode=14030019](http://money.rediff.com/money/jsp/p_1.jsp?companyCode=14030019)

## 5) Oriental bank of commerce

	Mar ' 09	Mar ' 08	Mar ' 07	Mar ' 06
Adjusted PBT (in crores )	1,280.98	1,341.38	1,031.68	955.05
% increase in profit	-4.5%	30%	7.42%	

Source: [http://money.rediff.com/money/jsp/p\\_1.jsp?companyCode=14030066](http://money.rediff.com/money/jsp/p_1.jsp?companyCode=14030066)

## Appendix#3

### I) Banking System- Top Banks in India

Abn Amro Bank | Allahabad Bank | American Express Bank | Andhra Bank | Bank Of India | Canara Bank | Central Bank Of India | Citibank | Corporation Bank | HDFC Bank | HSBC Bank | ICICI Bank | Indian Overseas Bank | Oriental Bank Of Commerce | Punjab National Bank | State Bank Of India (SBI) | Standard Chartered Bank | IDBI | United Bank Of India.

Source: [http://finance.indiamart.com/investment\\_in\\_india](http://finance.indiamart.com/investment_in_india)

### II) Rating on Qualisteam ★★★

Andhra Bank



Rating on Qualisteam: ★★★★★

Canara Bank



Rating on Qualisteam: ★★★★★

Indian Bank



Rating on Qualisteam: ★★★★★

**Oriental Bank of Commerce**



Rating on Qualisteam: ★★☆☆

**Bank of India**



Rating on Qualisteam: ★★★★★

**HDFC Bank**



Rating on Qualisteam: ★★☆☆

**ICICI Bank**



Rating on Qualisteam: ★★☆☆

Source: <http://www.qualisteam.com/Banks/Asia/India/>

**III) Top 5 India Banks ranked by Online Traffic**

Date: 07/2007	People	Month Δ	Year Δ	What is this?
statebankofindia.com	5,368	26.1%	-21.2%	The number of people visiting a site.*
hdfcbank.com	16,385	20.1%	34.8%	
citibank.co.in	44,463	-4.7%	22.2%	
standardchartered.com	8,672	70.8%	54.4%	
icicibank.com	64,890	62.6%	76.9%	

*\*People Counts are also known as unique visitors - they only count a person once no matter how many times they visit a site in a given month. People Counts are typically used to determine how popular a site is.*

Source: <http://www.theindiastreet.com/2007/08/top-5-india-banks-ranked-by-online.html>