

# CRISIL YOUNG THOUGHT LEADER 2007

*Dissertation topic:*

**How will Basel II change banking in India?**



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## Executive Summary

Indian banks today, operate in an environment characterized by progressive deregulation, increased global integration and IT usage which have opened up a plethora of domestic and international opportunities for them. At the same time, they take cognizance of the fact that banking worldwide has witnessed paradigm shifts from balance-sheet to off-balance-sheet financing, from capital adequacy to capital efficiency, and from pure banking to financial services. With the increased financial integration, the risks and financial fragility of the banking system have also increased, and so have the efforts of countries across the globe to coordinate supervisory efforts to mitigate these risks and to ensure level playing fields for all. Basel II guidelines are a set of such prudential regulatory norms which have an almost universal acceptance. RBI has enforced mandatory adoption of Basel II guidelines for Indian banks. This paper explores the impact of Basel II on the Indian banking and how it would lead to shifts in lending structure, benefit the larger and sophisticated banks and enhance the competitiveness of the banks in general, ahead of the opening up of the sector to foreign banks in 2009. It then elaborates on the key challenges that the Indian banks are likely to face in the implementation of Basel II guidelines, mainly in the areas of infrastructure requirements, development of credit assessment models, and supervisory skills. The concluding section outlines the additional improvements Indian banks would have to register in order to become globally competitive. Indian banks particularly need to make efforts to extend their reach and financial deepening, as also to eliminate operational and other structural inefficiencies, and ramp up their technology expenditures to build efficient systems. Also, with thinning spreads and contracting deposits, they would have to explore alternate sources of revenues such as an increase in fee based services and bring out new and innovative product offerings for their customers.

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## Introduction

### *The transition from Basel I to Basel II*

The Basel Committee on Banking Supervision (BCBS) was formed in 1974, following the failure of a small German bank Bankhaus Herstatt. The resulting financial contagion affected most of the G-10 countries and signalled a need for countries across the globe to coordinate supervisory efforts and lay down minimum banking standards, which became the core working objectives of the committee. Today, Basel is synonymous with the best practices and standards in banking regulation and supervision. Perhaps the most far-reaching initiative of BCBS was the laying down of minimum capital standards in 1988, known as the Basel Capital Accord, or Basel I. The genesis of Basel I can be traced back to the aftermath of the debt crisis following Mexico's suspension of payments in 1982. There was a widespread anxiety about the eroded capital levels of major international banks that were weakened through their exposures in Latin America and other less-developed countries. At the same time, there were concerns about a level playing field in the international competitive scenario, whereby the Japanese and French banks had benefited from 'under-pricing' international loans because of their low capitalization. These two reasons formed the main rationales behind Basel I. Today, despite the fact that Basel I is neither a formal treaty nor a binding rule it has an almost universal acceptance in the global banking system.

Basel I guidelines stipulate a minimum regulatory capital requirements for banks, commonly referred as the "Cooke ratio" of 8 %, which was determined arbitrarily in light of the then existing best practices. Basel I acknowledged only credit risk and invited criticism for its broad-brush categorization of credit exposures without distinguishing between differing risk profiles and risk management standards across banks, and for ignoring operational risk, interest rate risk, and liquidity risk. As one of the most significant indicators of banking performance- CAMELS rating - suggests, capital adequacy is only one of the elements required for sound banking; others being asset quality, management quality, earnings, liquidity, and sensitivity to market risk. The various shortcomings in Basel-I led to a revised framework Basel II, introduced in 1999, that seeks to address several of these issues.

## ***Basel I & Basel II – A comparison***

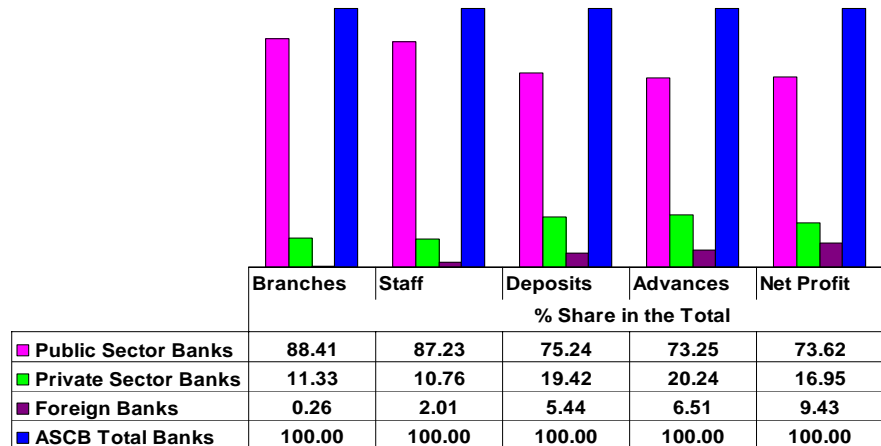
Basel II is an improvement over the earlier framework that aims to make the framework more risk sensitive and representative of modern banks' risk management practices. It allows banks to better align their regulatory and economic capital. The similarities and differences between Basel I and Basel II have been summarized in the table given below.

	<b>BASEL I</b>	<b>BASEL II</b>
<b>DIFFERENCES</b>	Focus on single risk measure, i.e. capital adequacy	More emphasis on a banks own internal methodologies, supervisory review and market discipline
	One size fits all approach	More comprehensive and flexible, menu of approaches, incentives for better risk management
	Credit risk assessment is on a flat rate basis: 5 categories from 0% to 100% according to: <ul style="list-style-type: none"> <li>○ Type of counterparty</li> <li>○ Geographic situation</li> <li>○ <i>Risk weights: 0 % for OECD government or central bank claims, 20 % for OECD interbank claims, 50 % for residential mortgages, 100 % for all commercial and consumer loans</i></li> <li>○ Broad brush approach regardless of varying risks, maturities, geographies, industries etc.</li> </ul>	Credit risk assessment is by taking into account the intrinsic counterparty quality and the transaction structure. <ul style="list-style-type: none"> <li>○ Depending on the level of bank sophistication, credit assessment can be done either by an external credit rating agency (<b>Standardized approach</b>) or in advances stages through internal credit assessment model (<b>Internal Rating Based Approach</b>)</li> <li>○ Countries adopting Basel II have some say in the determination of risk weights for various categories of credit exposures</li> <li>○ Guarantees and collaterals would be considered with a wider scope than Basel I</li> </ul>
	No provision for operational risk	Inclusion of explicit capital requirements for operational risk (15% of Gross Income smoothed over the past 3 years)
<b>SIMILARITIES</b>	Market risk introduced in 1996 to be calculated by Standard method or internal model (VAR)	Remains unchanged
	Definition of capital and minimum capital charges	Remain unchanged at 8%

## ***Indian economy and the banking sector***

The Indian banking system, through its credit delivery mechanism, has matched the strong economic performance of India by channeling funds to the productive sectors. Credit deposit (CD) Ratio increased to 72.5% against the benchmark 60% reflecting the strong underlying credit momentum.

In India, there are 88 commercial banks, which account for about 82% assets of the financial sector, over 2000 cooperative banks (5% of assets), and 133 Regional Rural Banks. Nearly 70% of branches are in rural/semi-urban areas.



*Source: Indian Banking: Shaping an Economic Powerhouse*

### **EXHIBIT-1**

Exhibit-1 compares the relative size of PSUs, private sector banks and foreign banks and it can be observed that PSUs significantly outnumber the remaining categories.

The phased reforms initiated by the government and the entry of private players have enhanced the competitiveness of the banking sector: Balance sheets have been bolstered and capital adequacy, asset quality, and efficiency ratios have improved. The sector has bright prospects because of the strong demand for various financial products with increasing purchasing power of Indian consumer. FDI of 74% is currently permitted in the sector and foreign players would be allowed to set up fully owned subsidiaries in 2009. Indian banking sector has also complied with the Basel guidelines.

## ***India's stand on Basel II***

In February 2005, the RBI issued draft guidelines for implementing a New Capital Adequacy Framework in line with Basel II. The deadline for implementation of Standardised approach of Basel-2 norms is 31-03-2008 for internationally active domestic banks and foreign banks operating in India. For all other scheduled commercial banks, this deadline is relaxed by 1 more year.

As per RBI's April 2007 guidelines, banks have to calculate their capital requirement in a parallel run of Basel-1 and Basel-2 standardized approaches atleast till 2010, so that a minimum floor level is maintained, after which the Basel-1 approach may be phased out.

## How will Basel II change banking in India?

### *Impact of the new capital accord and opportunities post Basel-II*

Basel II would bring about a paradigm change in Indian banking by acting as a catalyst for banks to adopt better risk management systems, which would enhance their competitiveness through a two-fold impact: increased profits because of risk management efficiencies and better preparedness when the sector opens up to foreign banks in 2009. It is also expected to change the way credit is priced in India, resulting in a shift in the lending pattern of banks and the larger and sophisticated banks will benefit the most. Also, in order to free up capital, banks may exhibit an increased preference for non-core banking activities such as asset securitisation and fee based services. These issues have been captured in detail below.

### **Global integration, arising opportunities, and the role of Basel II**

There are a plethora of opportunities shaping the dynamics of Indian banking sector today. Spread of internet has realized the possibility of marketing financial products and services on a global basis. Also, Indian banks are gearing up to face intense competition with the entry of foreign banks in 2009 which would likely result in consolidation in the sector to achieve critical mass. The consolidation would build economies of scale and help to leverage the synergies arising out of capital levels of the banks. [In this changing competitive landscape, the implementation of Basel II compliant risk management systems would better prepare the banks for the impending competition and enhance their global competitiveness. Basel II compliant banks would also enjoy enhanced reputation and better credit ratings abroad and could benefit from lower capital charges.](#)

In a move towards full capital account convertibility, banks have an opportunity to increase their overseas borrowings and to expand their potential source of funds. Also, there would be increased opportunities for financial intermediation for both Indian and foreign financial institutions with a likely increase in gross capital inflows and outflows. However, increased financial integration will bring with it greater risks such as foreign exchange risks, market risks and operational risks. [According to Dr. Y. V. Reddy, Governor, RBI, special defenses need to be put in place for ensuring financial stability in the case of countries like India that are faced with the prospect of volatile capital flows. The issues relating to cross-border supervision of financial intermediaries in the context of greater capital flows are just emerging and need to be addressed,](#) Basel II can act as a catalyst for further market reform.

## **Balance tilted towards larger banks and possible changes in financial structure**

Basel II implementation raises concerns that the larger banks will benefit more as they have well developed infrastructure required for better risk management activities and implementation of advanced approaches, and they could exploit the loopholes in Basel II better. These banks could price their products more competitively and attract assets with good credit profile. Smaller firms, on the other hand, may have to retreat into niche markets and engage in risky lending. Some of these banks may even find it difficult to survive, thus speeding up consolidation in the sector.

With the deepening of financial markets, firms and individuals have access to alternate channels of financing such as insurance, leasing, factoring mutual funds, pension funds and capital markets. Since the non banking financial institutions don't fall under the Basel norms, there is a possibility that bigger banks such as SBI, ICICI may like to reorganize their non-core subsidiary businesses in the form of holding companies in order to reduce the required regulatory capital. RBI guidelines on this are still awaited. In the same context, bank credit may get partially substituted by non-bank credit such as bonds, trade credit, credit from finance companies etc.

## **Basel II compliance and tools to reduce regulatory capital**

### *Inclination towards off balance sheet financing activities and fee based services*

According to a survey conducted by E&Y, banks are expected to engage in more active portfolio management strategies which include a move from buy-and-hold to more active loan sales and greater use of hedging and derivatives. Lenders are also expected to increase their efforts to promote fee-based services like investment banking and non banking financial services such as insurance and credit cards to minimize the impact on their capital base and boost earnings.

### *Opportunity for regulatory arbitrage in a move from Basel I to Basel II standardized approach:*

Basel II gives a free hand to national regulators to decide on risk weights of credit exposures. The following table in Exhibit-2 shows risk weights mandated by RBI and their likely impact on capital. This opportunity to reduce regulatory capital charges and save on funding costs might induce banks to undertake portfolio adjustments such as lending to rated but strong corporates or increasing their retail lending (with margins greater than 25%).

Credit exposure	BASEL I risk weight	BASEL II risk weight	Impact
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RETAIL	Personal/credit card loans:	125%	75%* (if margins are	(In Indian context mostly unrated borrowers, 100% would be applicable)
	Other retail loans:	100%	> 25%) else 100%	
CORPORATE	Long term loans and bond credit ratings	100%	To be decided by credit rating agency	Lower risk weights for rated borrowers , but impact wont be significant as these portfolios mainly have unrated entities) <b>Caveat: Unrated borrowers initially have risk weight of 150%</b>
	Bonds and debentures portfolio:	100%	To be decided by credit rating agency	Marginally lower risk weights for rated borrowers
	Short term exposures: cash credit, overdraft and working capital demand loans/ investments in commercial paper	100%	To be decided by credit rating agency	Marginally lower risk weights for rated borrowers

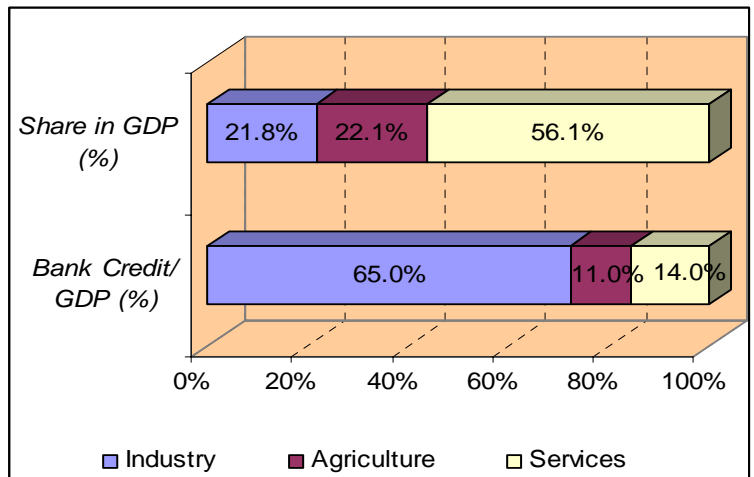
Source: ICRA Report, Basel II accord: Impact on Indian banks

\*For mortgage loans secured by residential property and occupied by the borrower, Basel II specifies a risk weight of 35%

**EXHIBIT-2**

**Other opportunities in the banking sector**

India’s financial services sector has huge scope. Exhibit-3 suggests that bank credit as a percentage of GDP to different sectors of economy is not proportional to the sector’s share of GDP. Also, the rural sector (22.1% share in GDP, 11% bank credit) reflects under-penetration and so holds immense banking potential. To exploit the opportunity, Indian banks can devise business models and experiment



Source: Indian Banking: Shaping an Economic Powerhouse

**EXHIBIT-3**

with multiple channels to provide banking services to rural customers. At the same time, banks can contribute further to economic growth by increasing agriculture credit, micro finance and by lending to self help groups which are backbone of rural economy.

Some of the other potential areas to look at would be: *consumer finance*, the market for which stands at about 2%-3% of GDP compared with 25% in some European markets, the *real estate*

*sector with its 30% annual growth, retail credit which is expected to cross INR 0.57mn by 2010 from the current level of INR0.189mn in 2005 and the SME sector (FICCI, 2006)*

### ***Challenges for Indian banks in Basel II implementation***

The banking sector in India still lacks in terms of efficient infrastructure and well developed credit rating systems because of which many challenges arise for Basel II implementation. Some of these might give rise to intra-national and cross-border implementation issues giving the sophisticated domestic and foreign banks an edge over others. The challenges could broadly be summarized as below.

#### **Capital requirements**

The capital requirement of banks is expected to increase with the inclusion of an additional capital charge for operational risk in Basel II, which may not be able to offset the reduction in regulatory capital for credit risk due to adoption of more risk sensitive models. The mandated capital norms for Basel II implementation has led to a series of IPOs and capital raising efforts which are likely to continue into the future. According to the FICCI survey on preparedness of Indian banks for Basel II, a majority of banks face an incremental capital requirement of 1-2% or more. With high dividend payouts and a cap on the amount of hybrid capital that can be raised, the future may see the banks crowding out each other's capital raising efforts as Basel II would make periodic capital market forays necessary for banks with aggressive balance sheet expansion plans.

#### **Risk management infrastructure and supervisory skills**

Cost and complexity involved: Indian banks, especially public sector ones, are still a step behind in terms of process standardization across their branches and rolling out core banking solutions to the customers. Implementation of Basel II calls for state-of-the art infrastructures for risk measurement and risk management, and this would entail a **substantial expenditure of \$10mn-\$150mn** which may either be out of reach or negatively impact the profitability of smaller banks. Also, Basel II is said to be complex in terms of comprehension which makes its implementation further difficult.

Data collection and credit assessment: The advanced approaches to measuring credit risk require a minimum of reliable five-year data sets for computation of credit risk parameters such as PD, LGD and EAD as well migration-mapping and supervisory validation. In India, such data sets are only

partially available posing a big challenge to the implementation, and banks are in the process of working out a data pooling arrangement by forming a consortium.

Supervisory skills: With Basel II implementations, there would be a huge requirement for skilled staff specialized in risk based supervision and validation/development of complex models both at the supervisory agencies and at the banks. At comparatively lower pay scales, government controlled supervisory agencies and banks may find it difficult to attract and retain talent because of competition from private sector.

Corporate governance: Basel II proposal emphasizes that sound risk management practices are related to good corporate governance. In the wake of Basel II implementation the onus would be on the Board to ensure that management establishes a framework for risk assessment, maintains adequate capital reflective of its risk profile and establishes a method for monitoring compliance with internal policies.

### **Banking structure and financial stability**

Basel II implementation raises some very important concerns for the banking system.

Smaller banks may lose out to larger, more sophisticated banks as they move towards true pricing of their credit exposures, as a result the smaller banks would be left with only higher-risk assets. While the bigger banks which implement the IRB approaches might be able to marginally reduce their capital requirements, smaller banks would lose out bank performance measures which might ultimately threaten their survival and lead to a spate of bank mergers and acquisitions in India.

Also, for the banks having presence in multiple countries, the market and regulatory differences between their 'home' and 'host' countries would imply that these banks might end up applying different Basel II approaches for their different operating entities, in some cases Advanced, and in others Standardized. This would lead to additional complexity and escalate cost of their implementation plans.

Even for standardized approaches where credit risk assessment would be done by external credit rating agencies there are only 4 rating agencies in India, CRISIL being one of them, who qualify for Basel II, whereas the number of corporate and non-corporate borrowers is large, spanning across various industries such as diamond, construction and textile. It seems almost infeasible that the rating agencies would be able to cover all the borrowers and large number of them will go un-rated and attract a high risk weightage of 150% (and higher capital goes with it), which is not a healthy sign for the banking system.

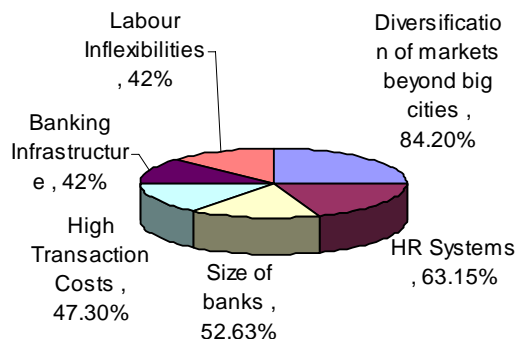
### ***Potential pitfalls of Basel II***

- Basel II does not give adequate guidelines for risks such as liquidity risk, interest rate risk and market risk which have been just glossed over in Pillars II and III.
- The cost of implementation, heavy infrastructure requirements for data management and supervision, and the complex credit assessment models for advanced approaches makes the Basel II norms heavily loaded in the favor of larger banks at the cost of smaller ones.
- Over reliance on credit rating agencies for estimation of capital in standardized approach is not without its faults, given the fears that the agencies have over-estimated the creditworthiness of some asset-backed securities. It may also encourage complacency on the part of the banks.
- Basel II may exacerbate business cycles by raising the risk weights and provisions for assets in an economic downturn.
- Basel II positively encourages banks to use instruments such as credit derivatives. These instruments are so complex and so many in number that banks would find it difficult to know who will bear the ultimate exposure to defaults.

### ***Additional improvements required by banks to become globally competitive***

Studies have shown that though Indian banking sector may not lag behind other countries in terms of banking performance indicators such as credit quality and return on assets (FICCI, 2006), it definitely is far behind in terms of scale and scope, as well as technological sophistication, and availability of skilled professionals.

#### **Areas of improvement for future growth**



A survey done by FICCI in 2006 indicates the opinions of banks as regards the improvement areas to enhance global competitiveness. 82.4% of the bankers indicated that Indian banks need to diversify out of the Tier-1 cities and expand their reach. 52.63% suggested that size may be a constraint (as increased size brings with it economies of scale) and that there is a very strong case for consolidation in the sector. A very high percentage of

Source: FICCI, *Indian Banking System: The Current State & Road Ahead*

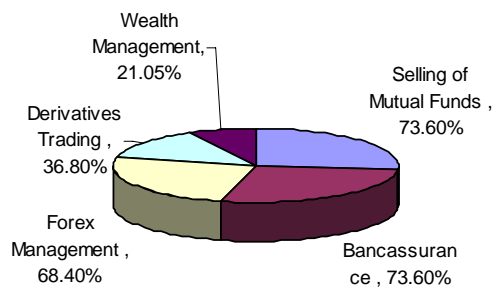
#### **EXHIBIT-4**

participants also pointed out to labor inflexibilities, problems with HR systems and the need for bank personnel to become more customer service oriented and efficient. To a question on achieving global competitiveness, *consolidation in the financial sector* emerged to be

the most significant measure required to create world class banking system followed by *strict corporate governance norms, regional expansion, higher FDI limits and FTA's*.

Until now, the Indian industry had enjoyed comfortable spreads, but with a booming economy and a rapidly growing credit off take, the competition for deposits is going to intensify in future. Net interest margins would be squeezed, forcing banks to explore new avenues of increasing fee based income and improving operational efficiencies. *A very unique characteristic of foreign banks is that they earn a very high proportion of operating income from fee based services as opposed to India, though this trend is now catching up in India too.* The

**New business opportunities tapped by banks**



survey of Indian banks by FICCI concluded that banks are tapping

*Source: FICCI, Indian Banking System: The Current State & Road Ahead*

**EXHIBIT-5**

the following new business opportunities (Exhibit-5), amongst which the selling of Mutual Funds and Bancassurance are the most popular ones followed by Forex Management. Banks have got the opportunity to bring out new and innovative products that satisfy various customer needs under one roof.

Technology is another important key driver of their business. Foreign banks and the new private sector banks in India have embraced technology right from the inception of their operations. *The IT spend by banking and financial services industry in USA is 7% of the revenues as against around 1% by Indian Banks.* To have better infrastructure and systems, our technology expenditure needs to be ramped up. There is also a need to ensure that the PSUs keep pace with these developments and also live up to the state objectives of financial inclusion.

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### EDUCATION

<b>ESCP-EAP, European School of Management, Paris</b> Masters in Management, Dual Degree Program (Finance)	2007-08 <b>GPA: Awaited</b>	Awarded the prestigious 'EGIDE Incentives Scholarship' by the Ministry of Foreign Affairs, France
<b>Indian Institute of Management (IIM), Lucknow</b> Post Graduate Diploma in Management	2006-08 <b>GPA: 7.5/10</b>	Ranked amongst the top 10 percentile of the batch
<b>Indian Institute of Technology (IIT), Delhi</b> Bachelor of Technology (Mechanical Engineering)	2001-05 <b>GPA: 8.6/10</b>	Awarded 'Merit scholarship for academic excellence' at IIT Delhi (top 5 percentile of the batch of 400) in Semester I, II & VIII
St. Johns Senior Sec. School, Kota (CBSE)	1999-01	Ranked 1 <sup>st</sup> in the district in Class X
<b>All India Senior School Certificate Examination (XII)</b>	<b>GPA: 86.2%</b>	Awarded National Merit Scholarship by Government of India for being in the top 0.1% of the appearing candidates in Mathematics
<b>All India Secondary School Examination (X)</b>	<b>GPA: 90.6%</b>	

### INTERNSHIP

*Organization:* **JP Morgan Chase, Mumbai (India)**    *Domain:* **Investment Banking, April 2007 – June 2007**

#### *Deliverables & Achievements*

- Identification of potential acquisition targets in the Telecom and Media sectors in India through industry landscaping and analysis of past private equity activity
  - Recommendations and pitch book were used to present to Private Equity firms interested in Asian companies
- Pitch preparation and exhaustive valuation exercise for a major telecom operator in Malaysia- as a part of a live project for a JPMC client - included Discounted Cash Flow, Comparables and Leveraged Buy Out methodologies

**PRE-PLACEMENT OFFER AS AN ANALYST IN INVESTMENT BANKING FROM J.P. MORGAN, INDIA**

### WORK EXPERIENCE

*Organization:* **Larsen & Toubro Ltd, Baroda (India)**    *Domain:* **Business Development, June 2005 - June 2006**

#### *Deliverables & Achievements*

- Project feasibility analysis and coordination with the team to conduct corporate risk management for target projects in the petroleum refinery sector
- Developed a cost-estimation model for the capacity enhancement project in Bangchak Refinery, Thailand
- Appraised for highest levels of performance and awarded best trainee, 2005-06

### POSITIONS OF RESPONSIBILITY

- **Core Coordinator, Special Interest Group in Finance (SIGFI)**, IIM Lucknow, 2006-07
  - Garnered sponsorship, coordinated with evaluators and published 'Edelweiss MUDRA'07'- the IIM Students' Journal of Finance - the only Finance journal showcasing latest research by students in India
  - Organized 'Finezze', the inter B-School case study challenge on valuation sponsored by Ernst & Young.

### KEY COURSES UNDERTAKEN

• Corporate Valuation	• International Finance	• Investment Banking and Financial
• Commercial Bank	• Emerging Markets Finance	• Investment Analysis and Portfolio