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Banking Bill 2012: A Review

Tejaswini Kulkarni

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Abstract

As a prerequisite for licensing of new banks in private sector, the Banking Bill, 2012 came into effect from 18.01.2013. The revised bill has worked on various areas of importance viz., regulatory powers of the central bank of India, voting rights of the shareholders, greater financial inclusion and increasing level of financial literacy in India. The bill was in the process of making, since 2005. The paper briefs the various amendments made to the original act, the purpose and its impact/relevance for the banks.

INTRODUCTION

Financial stability and performance direct the banking sector of a country. Post the financial crisis of 2008, countries attempted to ensure financial stability and growth by improved/amended regulations for the banking sector¹. Compared to the downfall in advanced economies, India experienced a muted effect. India's banking sector needs to essentially address issues regarding size of the banks², continued assurance about financial viability by strengthening the role of RBI³, higher participation of stakeholders in decision making and increase financial awareness of the common investors. Post crisis, Basel III is being implemented which demands stronger capital base and stringent supervisory norms. In the Post liberalization era in India, with the changing economic and business environment, and the wide gamut of financial products and services offered under universal banking, necessary amendments to the Acts governing the banking industry were due for long time. The bill has incorporated amendments in response to these necessities.

The bill is also essential to pave the way for new banking licenses to ensure safeguards against mis-utilisation of funds. RBI Governor Dr. Subba Rao said, "There are persuasive arguments both for and against the proposal (of allowing corporate houses in banking)...By far the biggest apprehension is about self-dealing — that companies will use the bank as a private pool of readily available funds."⁴ Present paper attempts to give a brief understanding of the Banking Bill 2012.

A BRIEF BACKGROUND OF THE BANKING BILL

The Banking Laws (Amendment) Bill, 2011, commonly referred to as the **Banking Bill**, was passed in the Lok Sabha on December 18, 2012 and in the Rajya Sabha on December 21, 2012.

¹ Global Banking Regulation & Supervision: What Are the Issues and What Are the Practices?, Barth, Gan, Nolle

² Deccan Herald, Dec 23, 2012 and Times Of India, 24 Feb 2013

³ Standing Committee on Finance, 43rd Report

⁴ Corporate Governance of Banks in India In Pursuit of Productivity Excellence, FICCI-IBA Conference, August 2011

The bill is an amendment to three existing acts, viz. the Banking Regulation Act 1949, the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980. The Banking bill with certain amendments to it, was earlier proposed in the Lok Sabha in 2005, however it lapsed due to dissolution of Lok Sabha. The Banking Laws (Amendment) Bill, 2011 incorporates some amendments in addition to those mentioned in Banking Regulation (Amendment) Bill, 2005.

The Banking Regulation Act, 1949 pertains mainly to the laws relating to banking, which also empowers the Reserve Bank of India to regulate, control and inspect the banks in India. Given the tremendous development of the banking sector in the past two decades, there was a need for certain amendments to the law in order to further develop the banking sector and strengthen the RBI's regulatory as well as supervisory powers.

The Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and 1980, which provides for acquisition and transfer of undertakings, in accordance to the need and in order to achieve national policy objectives, was proposed to be amended, to grant greater flexibility to the banks in raising capital to meet the regulatory requirements in the changing scenario.

In addition to these three acts, the bill also has amendments in regard to various other enactments, most importantly the Indian Contracts Act, 1872, Indian Stamp Act, 1899, the Reserve Bank of India Act, 1934 and others.

1. OBJECTIVES OF THE BILL

The bill, now called as the *Banking Laws (Amendment) Act, 2012*, enforced w.e.f from January 18, 2013 is aimed at the following:

- a) Increased regulatory/supervisory powers of the RBI for effective governance
- b) Increased voting rights
- c) Establishment of 'Depositor Education and Awareness Fund'

AMENDMENTS TO THE EXISTING ACT / NEW PARTS INSERTED

Bank Capital

In regard to bank capital, three amendments have been made, viz. flexibility in authorised capital, permission for issuing rights and bonus shares and permission for issuing preference shares.

These amendments are in line with the BASEL III guidelines issued by the RBI. According to the draft guidelines for implementation of BASEL III in India, banks can issue Perpetual Non-Cumulative Preference Shares (PCNPS), along with Innovative Tier 1 instruments (IPDI) (capped at maximum 15%) upto maximum 40% of additional (non-core) Tier 1 capital. This should not exceed 1.5% of risk weighted assets (RWA). The idea of issuing preference shares to raise capital is attractive as it is not shown in the debt books of the bank.

Stamp duty

The Indian Stamp Act, 1899 is amended such that stamp duty is exempted in case of conversion of a branch of any bank into a wholly owned subsidiary (WOS) of bank or transfer of

shareholding of a bank to a holding company (HC) of the bank. Any transfer of property, business, movable or immovable assets, contract, right, liability, obligation in regard to the above shall also be exempted from duty.

Parameter	Existing Provision	Proposed Provision as under Banking Bill, 2011	Provision as accepted under Banking Bill, 2012
Authorised Capital	According to the Banking Companies Act, 1970, authorised capital of nationalised banks was capped at Rs. 1,500 crore divided into Rs. 150 crore fully paid-up shares of Rs. 10 each.	To enable the nationalised banks to increase or decrease the authorised capital with approval from the Central Government and the Reserve Bank without being limited by the ceiling of a maximum of Rs. 3,000 crore.	The new law gives an option of increasing authorised capital of public sector banks upto Rs. 3,000 crore divided into Rs. 300 crore fully paid-up shares of Rs. 10 each; or reducing the face value of shares and dividing the authorised capital into such denomination as approved by the RBI.
Issue of "bonus shares" and "rights issue"	No specific provision was there in the BR Act, 1949. However, in the Companies Act, 1956, a banking company can issue bonus shares and rights shares.	Providing the nationalised banks to issue "bonus shares" and "rights issue" for accessing the capital market to raise capital required for expansion of banking business.	Specific provision made for the same subject to regulatory guidelines of the RBI.
Preference shares	No provision for issue of preference shares under BR Act, 1949.	The Banking Bill, 2011 had proposed to enable the banking companies to issue preference shares subject to regulatory guidelines of the RBI.	Specific provision made for the same subject to regulatory guidelines of the RBI.

Penalties

The Banking Bill, 2012 has increased penalties in regard to various cases of non-observance. Also for non-scheduled banks, failure to maintain CRR balances with the RBI on a daily basis, will be charged penal interest at bank rate+3%, and in case of continued shortfall, penal interest charged will be increased to bank rate+5%.

Definition of Approved Securities

The definition of approved securities was clarified to as securities issued by the Central Government or any State Government or such other securities issued by the RBI from time to time.

Enhanced Role of RBI

In the revised Banking Bill, a new clause is inserted providing RBI with enhanced power to supersede the entire Board of Directors of a banking company for a maximum period of 12 months, in case the conduct of the Board is found to be detrimental to the interest of the depositors. Also, the bill empowers RBI to call for any kind of financial information relating to banks' business or any associate enterprise of the bank or hold an inspection, if felt necessary. This aspect is of specific importance from corporate governance point of view, as new private banks are to be set up through Non-Operative Financial Holding Company (NOFHC) structure, registered as NBFC with RBI. However, the guidelines pertaining to these NBFCs will be different from those regulating the existing NBFCs.

Voting Rights

As proposed in the Banking Bill, 2011, the ceiling on voting rights of shareholders of nationalised banks has been increased from one percent to ten percent. For the private sector banks, it was proposed to remove the ceiling of ten percent on voting rights of shareholders and make it proportionate to the shareholding. However, the revised bill has provided for increasing the voting rights ceiling from ten percent to 26 percent in a phased manner. Also, any shareholding in excess of five percent will require prior approval from the RBI. In case of public sector banks, issue of preference shares for raising Tier 1 capital will prevent dilution of voting rights of the government.

Depositors' Fund

The bill has proposed to set up a Fund which will be utilised for the purpose of increasing financial literacy. The amount for the fund will come from the accounts of banks which are non-operative or unclaimed for more than ten years.

AMENDMENTS NOT APPROVED

The proposal to exempt mergers of banks from the scrutiny of Competition Commission of India (CCI) was not accepted. The continuance of dual regulation should be looked at positively as it will ensure efficient combinations and greater transparency of the entire process. Also, the proposal of allowing banks to trade in commodity futures was not approved. Given the lack of sufficient regulation for commodity trading according to the existing Forward Contract Regulation Act, 1952, the proposal needs to be looked at in greater detail in regard to the need as well as its implications for the banks.

CONCLUSION

The Banking Bill, 2012 is an amendment to the Banking Regulation Act, 1949, which has regulated the banking sector in India for more than six decades. The reformed bill came out as a necessary step, in alignment with the current needs as well as future growth of the banking sector. RBI has recently issued guidelines for licensing new private banks, whereby it has expressed the need for a dedicated policy on banking structure in India. The Banking Bill, along with amendments in various related acts governing the financial sector, paves a way for better financial intermediation in the economy.

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Convolutd Multiple-Factor Approach to Evaluate Performance of South Asian Equity Markets

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ABSTRACT

This paper studies the relationship between four major exchanges in South Asia belonging to emerging economies like China, Singapore, Malaysia and India. The South Asian Market is the fastest growing market in the world. The study evaluates major exchange of these economies on the basis of Risk-Return analysis, Capital Asset Pricing Model (CAPM), Correlation Coefficient, Alpha, Treynors Ratio and Optimal Portfolio. The MSCI Emerging Market Index is taken as a benchmark for this study in calculation of Beta for CAPM.

Keywords: Risk-Return analysis, Capital Asset Pricing Model (CAPM), Correlation, Coefficient, Alpha, Treynors Ratio and Optimal Portfolio.

INTRODUCTION

Hong Kong has a free market economy highly dependent on international trade and finance - the value of goods and services trade, including the sizable share of re-exports, is about four times GDP. Hong Kong's open economy left it exposed to the global economic slowdown, but its increasing integration with China helped it recover from the downturn more quickly than many observers anticipated. Hong Kong over the past few years has become increasingly integrated with China through trade, tourism, and financial links. Hong Kong has also established itself as the premier stock market for Chinese firms seeking to list abroad. The main index of Hongkong is Hang Seng . The Hang Seng Index, is a freefloat-adjusted market capitalization-weighted stock market index in Hong Kong. It is used to record and monitor daily changes of the largest companies of the Hong Kong stock market and is the main indicator of the overall market performance in Hong Kong. These 43 constituent companies represent about 60% of capitalisation of the Hong Kong Stock Exchange. About 40% of the firms listed on the Hong Kong Stock Exchange are now mainland Chinese companies. These firms account for 60% of the Exchange's market capitalization and over 70% of turnover. During the past decade, as Hong Kong's manufacturing industry moved to the mainland, its service industry has grown rapidly and in 2009 accounted for more than 90% of the territory's GDP. Hong Kong's natural resources are limited, and food and raw materials must be imported. GDP growth averaged a strong 4% from 1989 to 2008. Hong Kong's GDP fell in 2009 as a result of the global financial crisis, but a recovery began in third quarter 2009. Hong Kong continues to link its currency closely to the US dollar, maintaining an arrangement established in 1983.

Singapore has a highly developed and successful free-market economy. It enjoys a remarkably open and corruption-free environment, stable prices, and a per capita GDP higher than that of most developed countries. The economy depends heavily on exports, particularly in consumer electronics, information technology products, pharmaceuticals, and on a growing financial

services sector. Real GDP growth averaged 6.8% between 2004 and 2008, but contracted 2.1% in 2009 as a result of the global financial crisis. The economy has begun to rebound in 2010 and the government predicts growth of 3-5% for the year. Over the longer term, the government hopes to establish a new growth path that focuses on raising productivity growth, which has sunk to 1% per year in the last decade. The major index of Singapore is STI (Straits Times Index). The Straits Times Index (STI) is a market value-weighted stock market index based on the stocks of 30 representative companies listed on the Singapore Exchange. Launched in the wake of a major sectoral re-classification of listed companies by the Singapore Exchange, which saw the removal of the "industrials" category, the STI replaced the Straits Times Industrials Index (STII), and began trading 31 August 1998 at 885.26 points, in continuation of where the STII left off. Then, it represented 78% of the average daily traded value over a 12-month period and 61.2% of total market capitalisation on the exchange.

Malaysia's economic record has been one of Asia's best since its independence. Real gross domestic product (GDP) grew by an average of 6.5% per year from 1957 to 2005. Performance peaked in the early 1980s through the mid-1990s, as the economy experienced sustained rapid growth averaging almost 8% annually. High levels of foreign and domestic investment played a significant role as the economy diversified and modernized. Once heavily dependent on primary products such as rubber and tin, Malaysia today is a middle-income country with a multi-sector economy based on services and manufacturing. The government continues to actively manage the economy. Malaysia's New Economic Policy (NEP), first established in 1971, was a 10-year plan that sought to rectify a situation whereby ethnic Malays and indigenous peoples ("bumiputera"), who comprised nearly 60% of the population, held less than 3% of the nation's wealth. The Malaysian economy went into sharp recession in 1997-1998 during the Asian financial crisis, which affected countries throughout the region, including South Korea, Indonesia, and Thailand. Malaysia's GDP contracted by more than 7% in 1998. Malaysia narrowly avoided a return to recession in 2001 when its economy was negatively impacted by the bursting of the dot-com bubble (which hurt the ICT sector) and slow growth or recession in many of its important export markets. The global financial crisis threw Malaysia into recession again in 2009, and the government expects a contraction in GDP of around 3% for the year. Malaysian banks are well capitalized and have no measurable exposure to the U.S. sub-prime market. Bursa Malaysia (KLSE) is an exchange holding company approved under Section 15 of the Capital Markets and Services Act 2007. It operates a fully-integrated exchange, offering the complete range of exchange-related services including trading, clearing, settlement and depository services. Bursa Malaysia also has a range of progressive products and services which covers equities, derivatives, offshore listings and services, bonds and Islamic offerings.

India is developing into an open-market economy, yet traces of its past autarkic policies remain. Economic liberalization, including reduced controls on foreign trade and investment, began in the early 1990s and has served to accelerate the country's growth, which has averaged more than 7% per year since 1997. India's diverse economy encompasses traditional village farming, modern agriculture, handicrafts, a wide range of modern industries, and a multitude of services. Slightly more than half of the work force is in agriculture, but services are the major source of economic growth, accounting for more than half of India's output, with only one-third of its labor force. India has capitalized on its large educated English-speaking population to become a major exporter of information technology services and software workers. An industrial slowdown early in 2008, followed by the global financial crisis, led annual GDP growth to slow to 6.5% in 2009, still the second highest growth in the world among major economies. India escaped the brunt of the global financial crisis because of cautious banking policies and a relatively low dependence on exports for growth. India's fiscal deficit increased substantially in 2008 due to fuel and fertilizer subsidies, a debt waiver program for farmers, a job guarantee program for rural workers, and stimulus expenditures. The government abandoned its deficit target and allowed the deficit to

taxation are among the lowest in the world. Over the long-term, a growing population and changing demographics will only exacerbate social, economic, and environmental problems. The oldest and major index of India is BSE. The BSE Sensex or Bombay Stock Exchange Sensitivity Index is a value-weighted index composed of 30 stocks that started January 1, 1986. The Sensex is regarded as the pulse of the domestic stock markets in India. It consists of the 30 largest and most actively traded stocks, representative of various sectors, on the Bombay Stock Exchange. These companies account for around fifty per cent of the market capitalisation of the BSE.

OBJECTIVES OF STUDY

1. To find if there is correlation between the four South Asian Markets.
2. To compare the performance of the four stock markets with the emerging markets.

LITERATURE REVIEW

THOMAS C. CHIANG, SHUH-CHYI DOONG (2001) in their study found that volatility is an important indicator of performance of stock market. As per this paper volatility and returns are positively related. However, the greater the volatility higher is the risk of investing in that markets. Volatility is higher in Hongkong market and least in Singapore market but the expected returns are also in that order which compensates for the extra risk. Also the SGX, KLSE and Hangseng are significantly affected by unexpected volatility, which indicates there is a higher risk involved and the market movements are unpredictable. The asymmetric effect also impacts these markets as far as daily returns are concerned. The asymmetric effect helps in evaluating performance as if it is high, investors would shy away from investing in these markets as returns are unpredictable which will affect the performance of the markets. However, the effect has no impact on the monthly data which is a positive point from a long term investors point of view.

BILL WAN-SING HUNG AND YAN-LEUNG CHEUNG (1995) in their study found that cointegration implies whether there is a long term relationship among five Asian emerging markets. Cointegration is used by the foreign investors to diversify risk. When the stock prices are taken in local currency, the research indicates that there is no cointegration among the markets. However, if the weekly data is taken in dollars it indicates there is cointegration. This may be because of depreciation of US dollar in that period. The effect of exchange rate risk is important because the equity returns relevant to international investors, particularly the US investor, are returns in US dollars, they include the returns from the local stock returns and exchange rate fluctuations. Thus, we can conclude that performance of these markets is interdependent on each other (i.e correlation exists) if we take exchange rate risk into consideration. Thus, the benefits of international diversification by investing in the Asian-Pacific region may be limited.

SOENEN, LUC (2002) found through their study that the equity markets of Australia, China, Hong Kong, Malaysia, New Zealand, and Singapore are highly integrated with the stock market in Japan. There is also evidence that these Asian markets become more integrated overtime, especially since 1994. According to the report, higher import share as well as a greater differential in inflation rates, real interest rates, and gross domestic product growth rates have negative effects on stock market comovements between country pairs. Conversely, increased export share by Asian economies to Japan and greater foreign direct investment from Japan to other Asian economies contribute to greater comovement.

SUCHISMITA BOSE AND PARAMITA MUKHERJEE (2006) found that Indian index is most highly correlated with the Singapore STI index, and is also very highly correlated with the stock

index of Malaysia. Stock returns in India are seen to be highly correlated with returns in major markets like Hong Kong, Singapore. More importantly, during the period of our study, returns on the Indian BSE Sensex, is also seen to exert considerable influence on stock returns in Japan and Korea, along with Taiwan and to an extent Malaysia, though with a low probability. On the other hand, the degree of integration found between different markets show that there is still much scope for reaping benefits of portfolio diversification, at least in the short term, by investing in Indian markets, as integration of Asian markets is not of a very high order leaving sufficient room for switching between mature markets like the US and the Asian markets and India.

MOHD TAHIR ISMAIL AND ZAIDI BIN ISA(2008) in their study on VAR model, found that the three stock markets are not cointegrated. Therefore, the authors assume the returns data are regime-dependent and they used the two regime multivariate Markov switching vector autoregressive (MS-VAR) model with regime shifts in both the mean and the variance to extract common regime shifts behaviour from the return series. It is found that MS-VAR model with two regimes manage to detect common shifts in all the stock markets return series and this show evidence of comovement among the three returns series. Furthermore, we also found that the MS-VAR model manage to capture a satisfactory timing of the 1997 financial crisis that happen in the three countries.

RESEARCH METHODOLOGY

- In order to evaluate the performance of south Asian equity markets we have compared it with the MSCI Emerging Markets Index.
- We have calculated the average return and risk for each index.
- We have also found the inter correlation between the South Asian markets to find out whether their performance is dependent on each other.
- We have found out the optimal portfolio so as to guide an investor in India in what proportion he should invest in these markets
- We then calculated Beta value, to the find the change in one index due to 1% change in MSCI index.
- We have also calculated Alpha to check the performance of the Indices.
- In addition we have calculated Treynors ratio and Sharpe ratios to check the performance of indices.
- We have also carried out the regression analysis to find out how much each index contributes to the MSCI index

Alpha has two applications in the capital market. They are as follow:-

1. A measure of performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of a mutual fund and compares its risk-adjusted performance to a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund's alpha.
2. The abnormal rate of return on a security or portfolio in excess of what would be predicted by an equilibrium model like the capital asset pricing model (CAPM). According to first application, Alpha is considered to represent the value that a portfolio manager adds to or subtracts from a fund's return. According to second application, if a CAPM analysis estimates that a portfolio should earn 10% based on the risk of the portfolio but the portfolio actually earns 15%, the portfolio's alpha would be 5%. This 5% is the excess return over what was predicted in the CAPM model. A positive alpha of 1.0 means the fund has outperformed its benchmark index by 1%. Correspondingly, a similar negative alpha would indicate an underperformance of 1%.

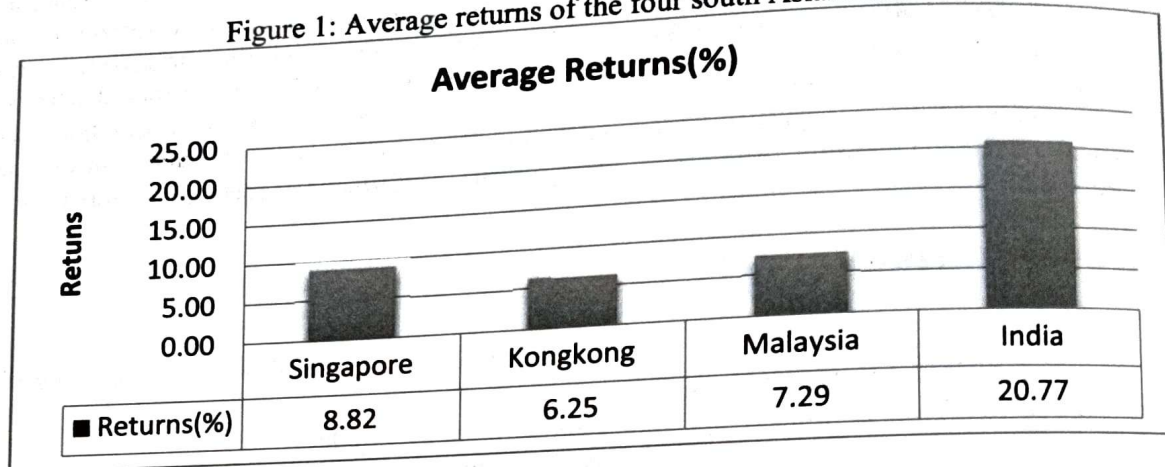
3. Treynor's Ratio that measures returns earned in excess of that which could have been earned on a riskless investment per each unit of market risk. The Treynor ratio is calculated as follow:

$$\frac{\text{Average Return of the Portfolio} - \text{Average Return of the Risk-Free Rate}}{\text{Beta of the Portfolio}}$$

In other words, the Treynor ratio is a risk-adjusted measure of return based on systematic risk. It is similar to the Sharpe ratio, with the difference being that the Treynor ratio uses beta as the measurement of volatility.

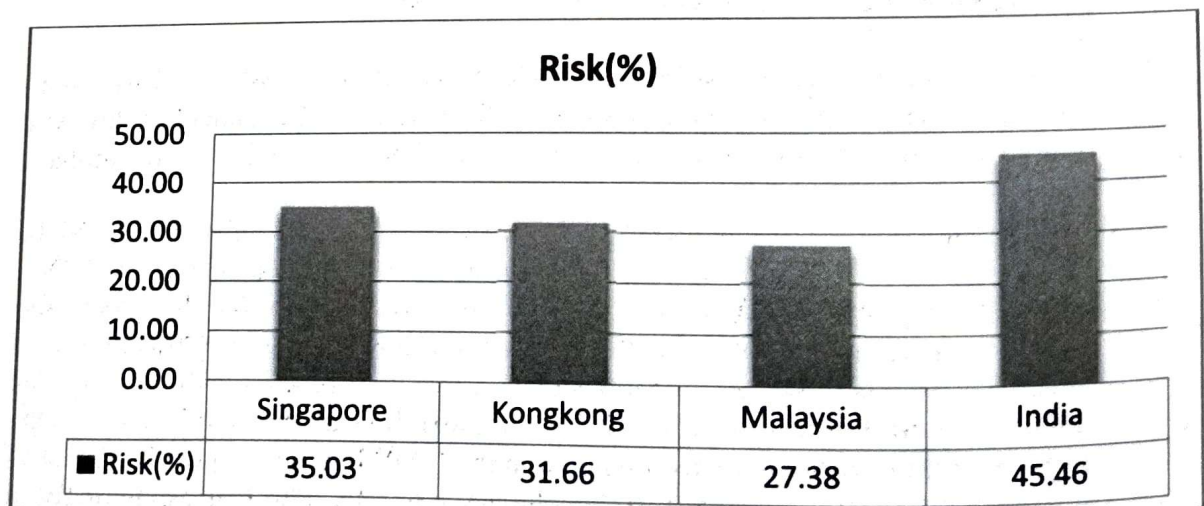
DATA ANALYSIS & FINDINGS

Figure 1: Average returns of the four south Asian markets



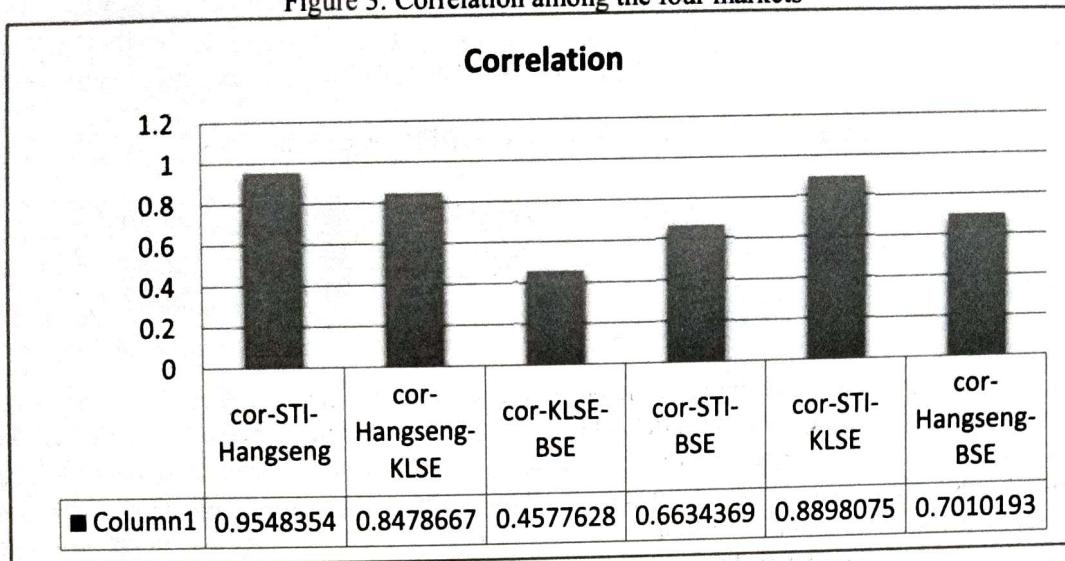
The returns are calculated by taking into consideration the ten year data (for Data refer Appendix Table 1). From the above graph we can see that India has given the maximum returns followed by Singapore. The main reason for India giving high returns is due to strong FII and FDI flowing into the economy. Also the Indian economy has strong fundamentals, owing to which the Indian markets were least affected by recession as compared to other markets. During the recession period in 2008-2009 the Malaysian markets fell the least (22.59%) followed by India, Singapore and Malaysia. Also the recovery in 2010 took place faster in Singapore followed by India, Hongkong and Malaysia.

Figure 2: Average risks for the four South Asian markets



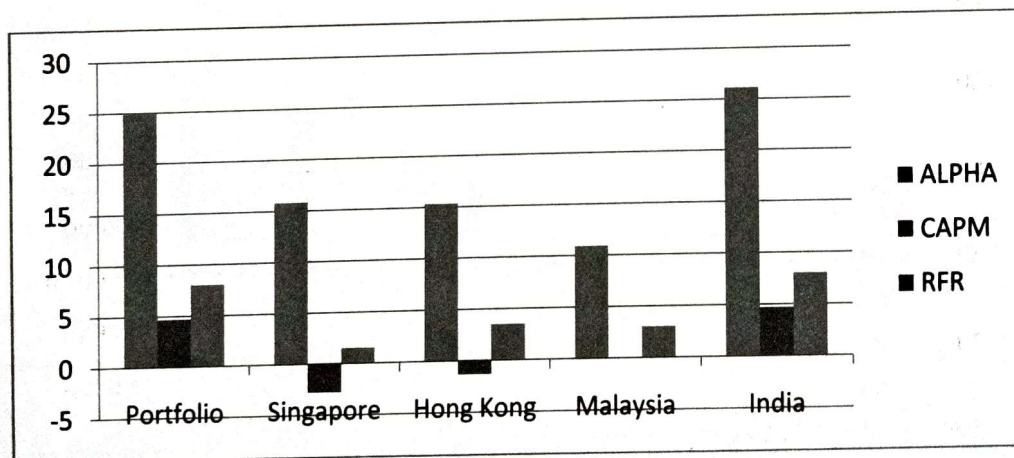
The returns are calculated by taking into consideration the ten year data (for Data refer Appendix: Table 1). From the above graph we can see that India has the highest risk followed by Singapore, Hongkong and Malaysia. India is the riskiest followed by Singapore, Hongkong and Malaysia. However the returns are also in that order which confirms with the Markowitz theory that investors are risk averse and higher risk needs to be compensated with higher returns.

Figure 3: Correlation among the four markets



The returns are calculated by taking into consideration the ten year data (for Data refer Appendix: Table 2). From the above graph we can see that Singapore is highly correlated with Hongkong and Malaysian markets, whereas Hongkong is highly correlated with Singapore and Hongkong. India is least correlated with Singapore and Malaysian markets with moderate correlation with Hongkong markets. Thus the investor can get diversification benefits by investing in India and other markets. Also Indian markets are least dependent on the three Asian markets.

Figure 4: Graph of Alpha, CAPM & RFR for four markets



In this research paper, we have used it according to the second application. We have first calculated the beta of the portfolio by using covariance of portfolio and MSCI index and variance of MSCI index. We have calculated risk and return of the portfolio by giving weights to each country according to optimum portfolio theory where India is assigned weight of 0.94 and Malaysia is given the weight of 0.06. The return of MSCI and the portfolio for last 5 years are taken to calculate covariance of the portfolio and MSCI, beta of the portfolio. The beta is then

used to calculate expected return of the portfolio through CAPM model which is then used to calculate alpha of the portfolio. For beta of individual country, we have first calculated covariance of country with MSCI index and then calculated beta. This beta is then used to calculate beta of individual country. The beta is then used to calculate expected return of the portfolio through CAPM model which is then used to calculate alpha of the each country. The expected return of the portfolio is 4.66% using CAPM model. (beta of port folio is 0.24, return of market of MSCI is -6%, risk free rate is 8%).

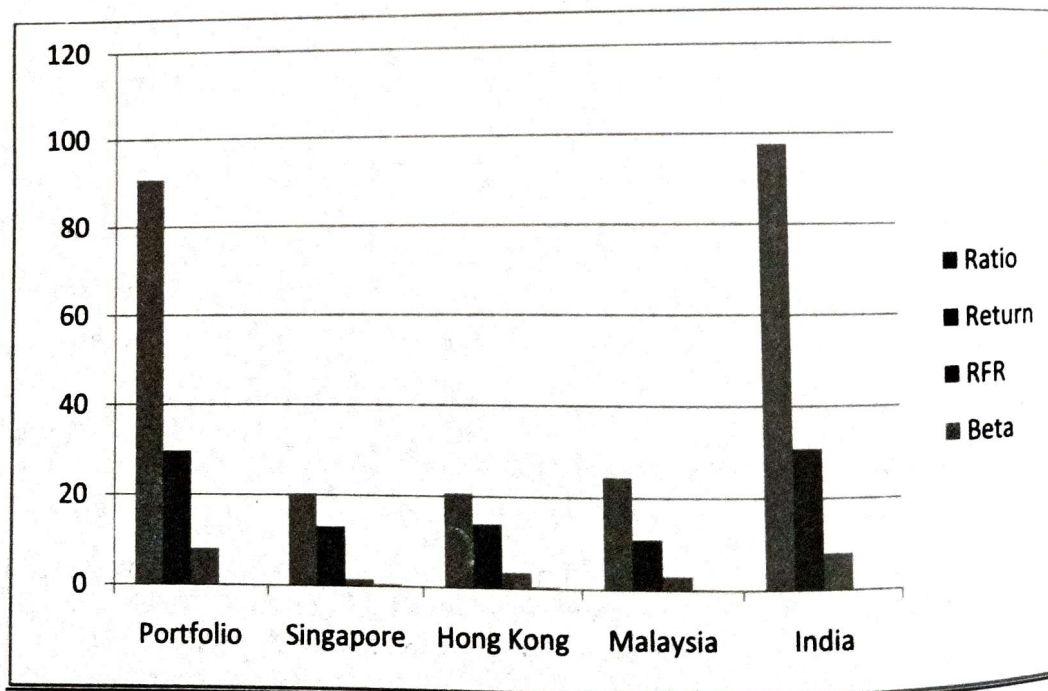
$$\text{Alpha} = \text{actual return} - \text{expected return}$$

Table 7 : Values of Alpha, CAPM & RFR for four markets

	Portfolio	Singapore	Hong Kong	Malaysia	India
ALPHA	24.99	15.79	15.31	10.89	26.12
CAPM	4.66	-2.76	-1.32	0.07	4.66
RFR	8	1.5	3.5	3	8

Since more weight is given to India in the portfolio, the average return of portfolio is very high compared to return of the CAPM model. Therefore the alpha of the portfolio is very high. But when we compare the average return of individual country with the expected return of the portfolio, then the alpha is lower for Singapore, Hong Kong, Malaysia but higher for India. The reason is that the average return of India in last 5 years is much more higher than other countries. Also other three countries risk free interest rate is very low compared to India. Therefore, their CAPM return are lower and therefore their alpha are higher. Otherwise, their alpha would have been much lower. We can also see that ratio is same for Singapore and Hong kong which shows that they are behaving in the same way i.e the both markets are highly correlated. Malaysia is little lower but it can also be conclude that it has high correlation with Singapore and Hong Kong. (For Data refer Table 3, Table 4, Table 5, Table 6 of Appendix)

Figure 5 : Graph of Treynor Ratio, Return, RFR & Beta for four markets



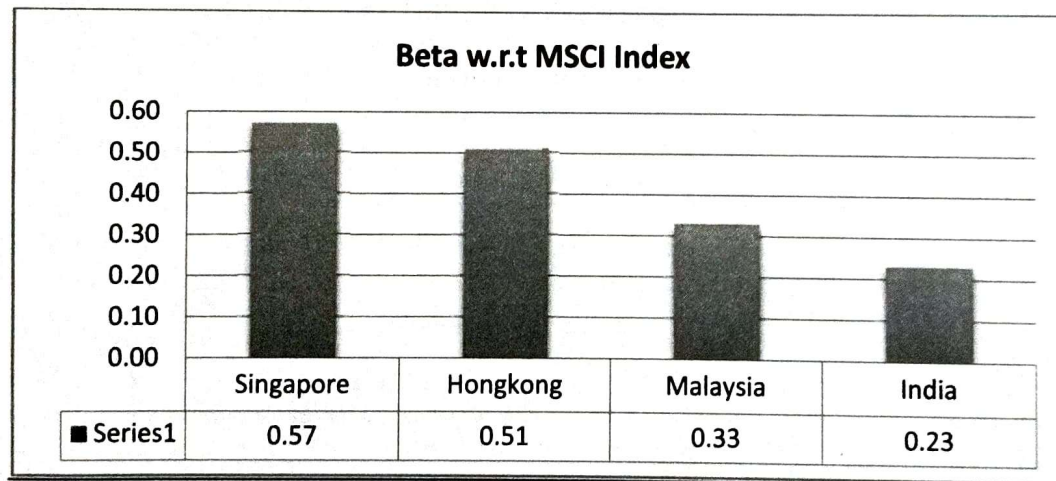
For our research , we have first calculated the beta of the portfolio by using covariance of portfolio and MSCI index and variance of MSCI index. We have calculated risk and return of the portfolio by giving weights to each country according to optimal portfolio theory where India is assigned weight of 0.94 and Malaysia is given the weight of 0.06 . The return of MSCI and the portfolio for last 5 years are taken to calculate covariance of the portfolio and MSCI, beta of the portfolio. The beta is then used with average return of portfolio to calculate treynor's ratio of the portfolio. For beta of individual country, we have first calculated covariance of country with MSCI index . This is then used to calculate beta of individual country. The beta is then used with average return of each country to calculate Treynor's ratio of the each country.

Table 8 : Treynor Ratio, Return, RFR & Beta for four markets

	Portfolio	Singapore	Hong Kong	Malaysia	India
Ratio	90.73	20.27	20.66	24.41	97.64
Return	29.65	13.03	13.99	10.96	30.78
RFR	8	1.5	3.5	3	8
Beta	0.24	0.57	0.51	0.33	0.23

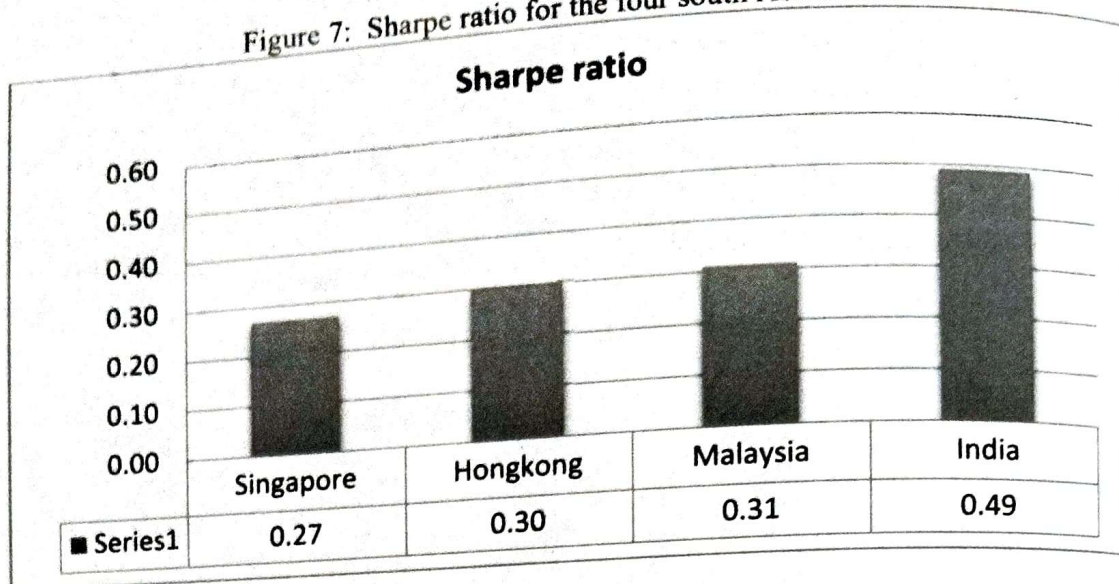
Here we can see that the ratio is higher for India. The reason is that the return are higher compared to other market and the beta is lower than other markets. Higher the Treynors ratio, better it is. We can also see that ratio is same for Singapore and Hong Kong which shows that they are behaving in the same way i.e the both markets are highly correlated. Malaysia is little lower but it can also be conclude that it has high correlation with Singapore and Hong Kong. (For Data refer Table 3, Table 4, Table 5, Table 6 of Appendix)

Figure 6: Beta with respect to MSCI emerging markets Index



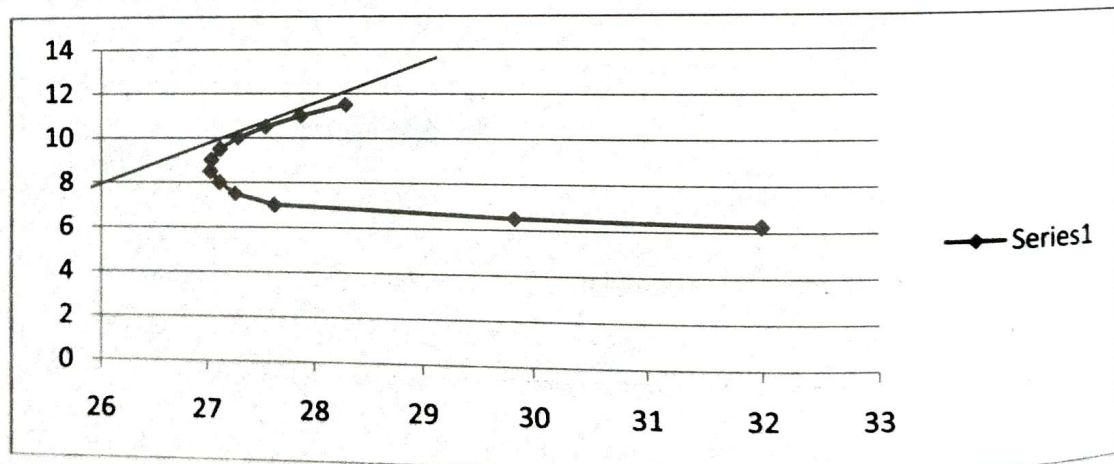
As can be seen from the above graph the beta for Singapore and Hongkong are moderate whereas for Malaysia and India it is very low(For Data refer Table 3, Table 4, Table 5, Table 6 of Appendix). This indicates that Singapore and Hongkong are largely dependent on how emerging markets perform whereas India and Malaysia are not much dependent on how these emerging markets perform. The correlation is least for India which supports the fact that India was least affected by recession when the returns of emerging markets fell.

Figure 7: Sharpe ratio for the four south Asian countries



The Sharpe ratio or Sharpe index or Sharpe measure or reward-to-variability ratio is a measure of the excess return per unit of risk in an investment asset or a trading strategy (For Data refer Table 3, Table 4, Table 5, Table 6 of Appendix). The Sharpe ratio is used to characterize how well the return of an asset compensates the investor for the risk taken, the higher the Sharpe ratio number the better. If we look at the graph above the sharpe ratio is highest for India followed by Malaysia, Hongkong and Singapore. This indicates that by investing in India you are better compensated for risk as compared to investing in other three countries. However, the sharpe ratios are moderate to low for these countries indicating that it is risky to invest in these countries. This is because of the fact that these are emerging countries, therefore uncertainty of returns are high.

Figure 8: Optimal Portfolio



The optimal portfolio gives the proportion in which you should invest in these four countries so as to maximize returns and minimize risk. Using excel solver and keeping return constant and objective to minimize the risk , weights were found out. All such portfolios were plotted and CML was drawn to find optimal portfolio.

Table 9 : Optimal Portfolio

Optimum Portfolio						
Weights (Singapore)	Weights (Hongkong)	Weights (Malaysia)	Weights (India)	Risk	Return	Sharpe
0%	0%	5.7%	94.3%	43.60%	20%	0.27523

This indicates that you should invest in the above weights so as to maximize returns and minimize risk and to optimize the sharpe ratio.

Table 10: Regression analysis of South Asian markets

Coefficients(a)

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	-1.274	1.659
	Singapore	.680	.525
	HongKong	.237	.480
	Malaysia	.327	.534
	India	-.034	.378

a Dependent Variable: MSCI

Regression gives us a linear equation which gives us the relationship between dependent and independent variable. Regression gives us the best –fit line reflecting the relationship between the two. The output below was run through SPSS taking MSCI Emerging market Index as dependent variable whereas taking Singapore index , Malaysia Index, KLSE index and BSE index as independent variable. Here we get the regression equation as:

$$\text{MSCI} = 0.6808 * \text{Singapore} + 0.237 * \text{Hong Kong} + 0.327 * \text{Malaysia} + -0.034 * \text{India}$$

This equation indicates how much each independent variable contributes to the changes in dependent variable. Thus, in this case, Singapore contributes about 68% ,Hongkong contributes about 23.7%, Malaysia contributes to around 32.7% and India contributes to around -3.4%. This indicates that all the dependent variables positively affect the MSCI index except India. As can be seen Singapore contributes maximum followed by Malaysia, Hong Kong and India. The constant here shows how much the MSCI index is dependent on other countries and it indicates a strong negative relationship which indicates when other emerging markets go down, the MSCI index would be very largely affected.

CONCLUSION

From this research paper we conclude several things about the performance of the markets. Firstly, the Indian market is least correlated with the three markets whereas Singapore is highly correlated with these markets. Secondly, the ratios which are calculated show that India has outperformed the markets followed by Hong Kong, Malaysia and Singapore. The optimal portfolio also suggests you should invest in India and Malaysia to maximize returns. Finally the

regression equation shows that MSCI index better reflects Singapore followed by Hong Kong, Malaysia and India.

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APPENDIX 1**Table 1**

Year	STI	Hangseng	KLSE	BSE
2010	69.85	54.51	33.29	53.71
2009	-43.47	-41.19	-22.59	-34.04
2008	-6.88	15.34	-3.21	24.62
2007	27.34	24.20	39.30	17.05
2006	18.31	17.11	7.99	92.58
2005	15.33	6.60	4.86	8.83
2004	47.53	47.31	32.97	91.06
2003	-29.82	-21.74	-20.61	-11.33
2002	10.60	-13.05	35.84	-5.14
2001	-20.59	-26.59	-34.94	-29.63
Average Returns	8.82	6.25	7.29	20.77
Risk	35.03	31.66	27.38	45.46

Table 2:

Correlation	
STI-Hangseng	0.954835466
Hangseng-KLSE	0.847866766
KLSE-BSE	0.457762865
STI-BSE	0.663436927
STI-KLSE	0.88980752
Hangseng-BSE	0.7010193

Table 3:

Year	Singapore	MSCI Index Returns
2010	69.85	69.77
2009	-43.47	-81.54
2008	-6.88	15.35
2007	27.34	17.68
2006	18.31	-51.18
Average Return	13.03	-5.99
Std. Deviation	41.98	60.22
RFR =	1.50	
Covariance of Portfolio & MSCI index		1649.78
Variance of MSCI		2900.98
Beta		0.57
CAPM Return:		-2.76
Alpha		15.79
Sharpe Ratio		0.27
Treyner' Ratio		20.27

Table 4:

Year	HongKong	MSCI Index Returns
2010	54.51	69.77
2009	-41.19	-81.54
2008	15.34	15.35
2007	24.20	17.68
2006	17.11	-51.18
Average Return	13.99	-5.99
Std. Deviation	34.65	60.22
RFR =	3.50	
Covariance of Portfolio & MSCI index		1473.59
Variance of MSCI		2900.98
Beta		0.51
CAPM Return:		-1.32
Alpha		15.31
Sharpe Ratio		0.30
Treynor' Ratio		20.66

Table 5:

Year	Malaysia	MSCI Index Returns
2010	33.29	69.77
2009	-22.59	-81.54
2008	-3.21	15.35
2007	39.30	17.68
2006	7.99	-51.18
Average Return	10.96	-5.99
Std. Deviation	25.67	60.22
RFR=	3.00	
Covariance of Portfolio & MSCI index		945.77
Variance of MSCI		2900.98
Beta		0.33
CAPM Return:		0.07
Alpha		10.89
Sharpe Ratio		0.31
Treynor' Ratio		24.41

Table 6

Year	India	MSCI Index Returns
2010	53.71	69.77
2009	-34.04	-81.54
2008	24.62	15.35
2007	17.05	17.68
2006	92.58	-51.18
Average Return	30.78	-5.99
Std. Deviation	46.83	60.22
RFR=	8.00	
Covariance of Portfolio & MSCI index		676.91
Variance of MSCI		2900.98
Beta		0.23
CAPM Return:		4.66
Alpha		26.12
Sharpe Ratio		0.49
Treynor' Ratio		97.64

Integrated Reporting in India

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Abstract

The rise of ethical consumerism and shareholder activism have led to increasing demand for more detailed disclosure of non-financial information so that companies can be more accountable to a broader base of stakeholders. The present study attempts to identify some of the views related to importance and disclosure; standardization; reporting; and education of integrated reporting that the accounting professionals will be confronted with in future. The study uses a survey methodology. Purposive sampling technique was used. The findings are presented by the use of descriptive statistics.

Key words: Integrated Reporting, disclosure, standardization, reporting, non-financial information.

INTRODUCTION

The rise of ethical consumerism and shareholder activism have led to increasing demand for more detailed disclosure of non-financial information so that companies can be more accountable to a broader base of stakeholders..

Under the current listing requirements, companies are only required to disclose in their annual report a description of the corporate social responsibility activities or if there is none, a statement to their effect. Although companies generally comply with this requirement, there is still a gap in that companies do not provide an assessment of the impact of their business operations on communities. The landscape changes signify that companies can no longer rely solely on their financial performance as an indicator of their overall performance and need to enhance the reporting of non-financial information

MEANING OF INTEGRATED REPORTING

Integrated reporting refers to the integrated representation of a company's performance in terms of both financial and non-financial results. Key to such reporting is the linkage between an organisation's strategies, governance and financial performance and the social, environmental and economic context within which it operates "Integrated Reporting means a holistic and integrated representation of the company's performance in terms of both its finances and its sustainability" - King's Report on Governance for South Africa.

SIGNIFICANCE OF INTEGRATED REPORTING

The primary purpose of an accounting information system is the collection and recording of data and information regarding events that have an economic impact upon an organisation and the maintenance, processing and communication of such information to internal and external stakeholders (Stefanou, 2006). Current reporting standards such as the International Financial

Reporting Standards (IFRS) or Generally Accepted Accounting Principles (GAAP) focus narrowly on financial information and do not fully consider the social, environmental and long term economic context within which the business operates. Some companies have progressed further in producing 'Sustainability' or 'Environmental, Social and Governance' (ESG) reports. However, these reports do not necessarily connect the ESG risks and opportunities with the business strategy and model. Integrated Reporting represents an approach that is aimed at bringing together data that is relevant to the performance and impact of a company in a way that will create a more profound and comprehensive picture of the risks and opportunities a company faces, specifically in the context of the drive towards a more sustainable global economy.

CURRENT SCENARIO

According to the Global Reporting Initiative (GRI), approximately 160 companies that use its G3 Guidelines for sustainability reporting issued an integrated report in 2010. In France, the Grenelle II legislation requires all companies, both public and private, with 500 or more employees to provide non-financial information in their annual reports starting 2012.

International Integrated Reporting Committee (IIRC) research (2011), examining 101 annual reports in the G20, found that just under half (42%) of the listed company annual reports surveyed adhere to integrated reporting good practice standards. In the US, the Securities and Exchange Commission has published guidance on what public companies should disclose to investors on risks related to climate change. US is lagging behind with only 19% of integrated reporting criteria being fulfilled with only 17% of reports presenting a link between the company's sustainability strategy and group strategy. In China only 36% of reports and in India, only 33% are fulfilling integrated reporting criteria. The most compliant country in terms of sustainability reporting is South Africa where 73% of reports were meeting the integrated criteria. This high level of compliance in South Africa is linked to King's Code of Governance which require all listed companies on Johannesburg Stock Exchange to produce an integrated report for all year ends commencing on or after March 2010, or explain why they have not done so.

GRI Reporting in Asia

Year	No. of GRI Reports in Asia
2004	33
2005	38
2006	58
2007	94
2008	188
2009	314
2010	398
2011	410

Source: GRI Database, March 2012

In 2004, there were 33 GRI reports. In a span of 8 years, the number of GRI reports has increased more than ten-fold to 410.

Breakdown of GRI Reports in Asia in 2011



- Japan
- China
- Korea
- India

LITERATURE REVIEW

Challenges facing the financial accounting and the accounting profession have been discussed among researchers (Alles et al. 2000; Olivier 2000; Sutton 2000; Vasarhelyi & Greenstein 2003). The finance literature posits that increasing financial information credibility reduces the cost of capital by reducing investors' information risk (Klein and Bawa 1976, Barry and Brown 1985, Diamond and Verrecchia 1991, Coles et al. 1995, Khurana and Raman 2004, Mansi et al. 2004, Pittman and Fortin 2004). According to a study, 'The Impact of a Corporate Culture of Sustainability on corporate behaviour and performance' (November 2011) by Harvard Business School Professors, Robert Eccles and George Serafeim, along with Ioannis Ioannou of the London Business School, found that companies that operate in a sustainable manner have a higher rate of return on investment compared with those that do not. Robert G. Eccles in the article 'Get Ready: Mandated Integrated Reporting is the future of Corporate Reporting' (March 2012) calls for mandatory integrated reporting and explains challenges in creating globally acceptable non-financial standards.. Raz Godelnik's article on '5 reasons why integrated reporting can be a game changer' (March 2012) compares opportunities and challenges of integrated reporting. Deloitte Netherlands in an article 'Maatschappij wil brede zekerheid van accountant' (in Dutch) March 2012 expects pure financial reporting to be reduced as integrated reporting becomes more common. Robert Ludke in the article 'Integrated Reporting: Manage Public Expectations of Corporate Performance' (March 2012) suggests that mandatory reporting requirements and growing public expectations mark the beginning of an emerging trend. Mervyn King in the foreword to the South African Discussion Paper on Integrated Reporting (January 2011) stated that 'reports based largely on financial information do not provide sufficient insight to enable stakeholders to form a comprehensive picture of the organisation's performance and of its ability to create and sustain value, especially in the context of growing environment, social and economic challenges'.

METHODOLOGY

The study uses a survey as a research method. A structured questionnaire was given to 50 experienced practising chartered accountants who are members of the Institute of Chartered Accountants of India to know their views on integrated reporting. Purposive sampling technique was used. Out of the 50 questionnaires sent out, 45 were received, representing 90%. The chartered accountants were contacted personally. The tools used for analysis were weighted average score and percentage, mean and likert scale. The findings are presented by the use of descriptive statistics. The study surveys opinions on four areas of integrated reporting:

- a. Importance and Disclosure
- b. Standardisation
- c. Reporting
- d. Education

OBJECTIVE OF THE STUDY

Given the strong involvement of chartered accountants in the development of Integrated Reporting, the accounting profession is expected to face new challenges. The main objective of the study is to examine the views of accounting professionals in India on four areas of Integrated Reporting i.e. importance and disclosure; standardization; reporting and education.

SURVEY DEMOGRAPHICS

This research focuses on views of accounting professionals on the importance and disclosure; standardization; reporting and education of integrated reporting in India only. Out of the 50 questionnaires sent out, 45 were received, representing 90%.

DISCUSSION

The responding CA's are from diverse backgrounds. Diversification of sample ensures that the findings are broad-based.

(A) Profile of Respondents

Table-1: Gender

Gender	No.	(%)
Male	39	87
Female	6	13
Total	45	100

Out of 45 respondents, six were females, representing 13% while 87% were males.

Table-2: Age

Age	No.	Percentage (%)
Below 30 years	7	16
30-40 years	8	18
40-50 years	19	42
Above 50 years	11	24
Total	45	100

The highest number (42%) of respondents belong to the age group 40-50 years followed by 24% above 50 years.

Table-3: Professional Experience

Years	No.	(%)
Below 5 years	6	13
5-10 years	5	11
10-15 years	4	9
15-20 years	19	42
Above 20 years	11	25
Total	45	100

42% of the respondents had professional experience of 15-20 years followed by 25% respondents who had professional experience of more than 20 years.

Table-4: Qualifications of Respondents		
Qualification	No.	(%)
	37	82
C A	6	13
C A and C S	2	5
Any other	45	100
Total		

82% of the respondents possessed only CA degree while 13% had a CA and CS degree while 5% of the respondents were not only CA but also had other degrees in either law or cost accounting.

(B) Integrated Reporting

a. Importance and Disclosure

Table- 5: Respondent's Opinion		
	Agree	Disagree
Important for firms to provide non-financial information in addition to financial information	45	-
Possible to draw linkages between financial and non-financial information	45	-
Non-Financial information should be valued quantitatively as well as qualitatively	40	5
Integrated reporting will reduce financial reporting frauds	32	13

The traditional reporting model was developed for an industrial world. Although it continues to play a valuable role with respect to stewardship of financial capital, it nonetheless focuses on a relatively narrow account of historical financial performance and of the value creation process. Although integrated reporting is still an embryonic management practice, all the respondents were in agreement that it is important for firms to provide non-financial information to financial information and that it was possible to draw linkages between financial and non-financial information. 40% respondents agreed that non-financial information should be valued quantitatively as well as qualitatively while 32 % respondents were of the view that integrated reporting will help to reduce financial reporting frauds.

Table- 6: Develop linkages between different aspects of performance of business

	No.(f)	Rank (x)	fx
Very Important	26	3	78
Important	15	2	30
Not important	4	1	4
	45		112

$$\text{Mean} = \frac{112}{45} = 2.49$$

Drawing meaningful links is the essence of integrated reporting. The linkages of issues across an Integrated Report can help keep it focused on material issues. The above table indicates that majority of the respondents felt that it was very important to develop linkages between different aspects of performance of business.

Table-7: Advantages of Integrated Reporting

Importance of Integrated Reporting/Rank	1	2	3	4	5	6	To
Improved reputation/brand	3	16	33	52	35	18	4
Improved Stakeholder communication and relationship	14	18	27	28	15	18	4
Improved risk management	6	22	21	72	-	18	4
Identification of areas of cost/savings and reduces wastage	17	16	12	8	55	114	4
Explore and exploit new and politically innovative business opportunities	5	10	18	12	35	66	4
Improved performance evaluation	3	10	21	12	80		4

Table-8: Weighted Average Score

Importance of Integrated Reporting/Rank	Weighted Average Score	Rank
Improved reputation/brand	157	4
Improved stakeholder communication and relationship	120	1
Improved risk management	139	3
Identification of areas of cost/savings and reduces wastage	126	2
Explore and exploit new and politically innovative business opportunities	194	6
Improved performance evaluation	192	5

The responding CAs' were asked to rank the advantages of integrated reporting. Improved stakeholder communication and relationship was given the first rank followed by identification of areas of cost/savings and reduced wastage while the third and fourth rank was given to improved risk management and improved reputation/brand respectively. Integrated reporting provides a high level of transparency and it is the best way for an organization to create value for shareholders over a long term. Risk management can be enhanced because organization will consider risk from an integrated perspective.

Table-9: Costs of Integrated Reporting

Costs	No.	%
Direct costs to gather information	17	38
Direct costs to prepare report	12	26
Cost of assurance for accuracy and relevance	16	36
Total	45	100

One of the challenge is to have systems in place for gathering and reporting non-financial information and ultimately integrating it with financial information. The greatest perceived cost of integrated reporting are direct costs required to gather information. 38% of the respondents were of the opinion that the cost of integrated reporting was direct costs to gather information followed by cost of assurance for accuracy and relevance.

b. Standardization

Table- 10: Standardization of Integrated Reporting

	No.(f)	Rank (x)	Fx
Strongly agree	13	2	26
Agree	31	3	93
Disagree	1	1	1
	45		120

$$\text{Mean} = \frac{120}{45} = 2.66$$

Information has to be comparable to be meaningful. There is no universally agreed standard for non-financial performance. Almost all the respondents agreed that existence and application of standards for integrated reporting was necessary as it increased the usefulness of information.

Table- 11: Commonly used Standards/Guidelines for non-financial information

	No.	(%)
GRI Sustainability Reporting Framework	5	11
Key Performance Indicators	25	56
Carbon Disclosure Project	15	33

Voluntary standards play an important role not only in developing best practice but also in informing investment decisions and company analysis. 56% respondents felt that KPI was commonly used for reporting non-financial information followed by Carbon Disclosure Project (33%).

Table- 12: Voluntary Framework representing best practice		
	No.	%
	17	38
GRI Sustainability	-	-
ISO 26000	28	62
King's Report on Corporate Governance	-	-
Any other		

62 % respondents were of the opinion that King's Report on Corporate Governance represents the best practice.

Table-13: Type of Standard		
	No.	%
Applicable to all industries	-	-
Sector specific	45	100
Total	45	100

All the respondents felt that standardization is necessary for greater comparability and simplicity for users and reporters and that standards should be sector specific i.e. they need to be modified by industry.

Table-14: Challenges for creating Non Financial Standards		
	No.	%
To do it quickly	3	6
How to make it legitimate	17	38
How to make it institutionally legitimate	25	56
Total	45	100

56% of the respondents were of the opinion that the biggest challenge to create non-financial standard is to make it institutionally legitimate. They felt that Integrated Reports should have integrated audits to ensure their quality.

Table-15: Institutional Legitimacy for creating Non Financial Standards		
	No.	%
Through Stock Exchanges	18	40
Through Legislation	22	49
Any other	5	11

49% respondents felt that institutional legitimacy for creating standards can come about through legislation.

c. Reporting

Table- 16: Most preferred Format		
	No.	%
PDF	12	27
Dedicated Website	3	6
Combination of format depending on the type of information	30	67

67% respondents preferred a combination of format depending on the type of information to report non-financial information.

Table-17: Leading Authorities for executing Assurance

	No.	%
Audit Firms	5	11
Industry Associations	-	-
Regulatory Bodies	40	89

Given the importance of assurance and audit within financial reporting, it was felt necessary to know the accounting professional's perception on assurance of non-financial information. Some information in an integrated report may be more difficult to assure than information disclosed under traditional reporting frameworks. This will require the development of new techniques, standards and reporting mechanism to support assurance on Integrated Reports. An independent assurance of sustainability reports is recognized as best practice. Assurance Statements add credibility to Integrated Reporting. 89% respondents were of the view that regulatory bodies should be the leading authorities for executing assurance.

Table-18: Relevance and Comparability

	More relevant for a firm's analysis	More difficult to compare
Governance information	24	17
Environment information	3	15
Social information	18	13

Integrated Reporting brings together the material information about an organization's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It is difficult to assess or monetize non-financial information as costs/benefit to society. 24 respondents were of the opinion that governance information is more relevant than Environment and Social information for a firm's analysis and majority i.e 17 respondents felt that governance information was also difficult to compare.

Table- 19: Meaning of Comparability in the context of your role as Auditors

	No.	%
Benchmarking qualitative/ quantitative performance	7	16
Focusing comparability on material issues	7	16
Standardizing methodologies for reporting performance	21	46
Comparing similar companies within the same sector	10	22

The respondents were asked for their insights on what they understood by the term 'comparability' in the context of their role as auditors. 46% were of the view that comparability meant standardizing methodologies for reporting performance. Integrated reporting provides a platform to help enhance sector specific reporting models.

Table-20: Quality of Integrated Reporting

	No.	(%)
Relevance and materiality	22	49
Clear and understandable language	4	9
Comparability and consistency	19	42
Verifiability	-	-
Total	45	100

The concept of materiality is fundamental to corporate reporting. Information is material if its omission or mis-statement could influence the economic decision of users taken on the basis of financial decision. (International Financial Reporting Standards). Relevance has to do with providing information that assist stakeholders to evaluate the organisation's performance and to make assessments about the ability of the organization to create and sustain value. 49% of the CAs were of the opinion that relevance and materiality followed by comparability and consistency were important for preparing and enhancing the quality of an integrated report.

d. (Education)

Table-21: Creation of Awareness

	No.	%
Through events and Workshops	41	91
Promote trust in the framework	4	9
Include value chain requirements to encourage adoption of GRI	-	

All the respondents felt it was necessary to raise awareness through events and workshops and promote trust in the framework.

Table- 22: Aspects to be included in courses on Integrated Reporting

	No.	%
Regulatory and Voluntary trends in non financial reporting	10	22
Valuation techniques of non financial information	20	44
Drawing meaningful linkages between financial and non-financial information	15	34

All the respondents felt the need to receive education in non financial reporting, particularly on valuation techniques of non financial information and drawing meaningful linkages between financial and non-financial information and evinced an interest in attending such courses.

SUGGESTIONS

Sustainability reporting has hardly taken off in India. There is a need to create and promote awareness about adoption of integrated reporting through events and workshops. Education in interpreting non financial information will encourage disclosure. There is an urgent need to standardize reporting non-financial information to aid comparability for investor. New techniques, standards and reporting mechanism should be developed to support assurance on Integrated Reports.

CONCLUSION

The development of Integrated Reporting will require a change in established thinking about decision making and reporting. There is a need for standards related to measurement, recording and disclosure of Integrated Reporting. A strategic focus, connectivity of information, future orientation, responsiveness and stakeholder inclusiveness, conciseness, reliability and materiality are the major challenges faced while preparing an Integrated Report.

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Infrastructure Projects and Public Private Partnerships: The Concept, Indian Experience and Emerging Issues

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Abstract

Project financing in the developing world peaked around the time of the Asian Financial Crisis but the subsequent downturn in industrializing countries was offset by growth in the OECD countries, causing worldwide project financing to peak around 2000. The need for project financing remains high throughout the world as more countries require increasing supplies of public utilities and infrastructure. The new project finance structures emerged primarily in response to the opportunity presented by long term power purchase contracts available from utilities and government entities, better known as Public Private Partnerships (PPP).

This research paper presents the concept of Infrastructure projects and the past trends in financing for infrastructure projects in the first part. The second part discusses the Indian experience in financing infrastructure projects along with a discussion on PPP with its advantages and limitations. Emerging issues are posed in the conclusion.

Keywords: Infrastructure Projects, Project Financing Arrangements, Public Private Partnership (PPP), Risk Transfer

INTRODUCTION: THE CONCEPT

Project finance for long-term infrastructure projects is based upon a complex financial structure than industrial projects where project debt and equity are used to finance the project. Usually, a project financing scheme involves a number of equity investors, known as sponsors, as well as a syndicate of banks which provide loans to the operation. The loans are most commonly non-recourse loans, which are secured by the project itself and paid entirely from its cash flow, rather than from the general assets or creditworthiness of the project sponsors. The financing is typically secured by all of the project assets, including the revenue-producing contracts. Project lenders are given a lien on all of these assets, and are able to assume control of a project if the project company has difficulties complying with the loan terms. Generally, a special purpose entity is created for each project, thereby shielding other assets owned by a project sponsor from the detrimental effects of a project failure. As a special purpose entity, the project company has no assets other than the project. Capital contribution commitments by the owners of the project company are sometimes necessary to ensure that the project is financially sound. Project finance is often more complicated than alternative financing methods. It is most commonly used in the mining, transportation, telecommunication and public utility industries. These long term revenue streams were required by rules implementing the Public Utilities Regulatory Policies Act of 1978 (PURPA). Originally envisioned as an energy initiative designed to encourage domestic renewable resources and conservation, the Act and the industry it created lead to further deregulation of electric generation and, significantly, international privatization following amendments to the Public Utilities Holding Company Act in 1994. (PUHCA) The structure has

evolved and forms the basis for energy and other projects throughout the world. A typical structure of a project finance scheme for infrastructure and public utilities is presented below:

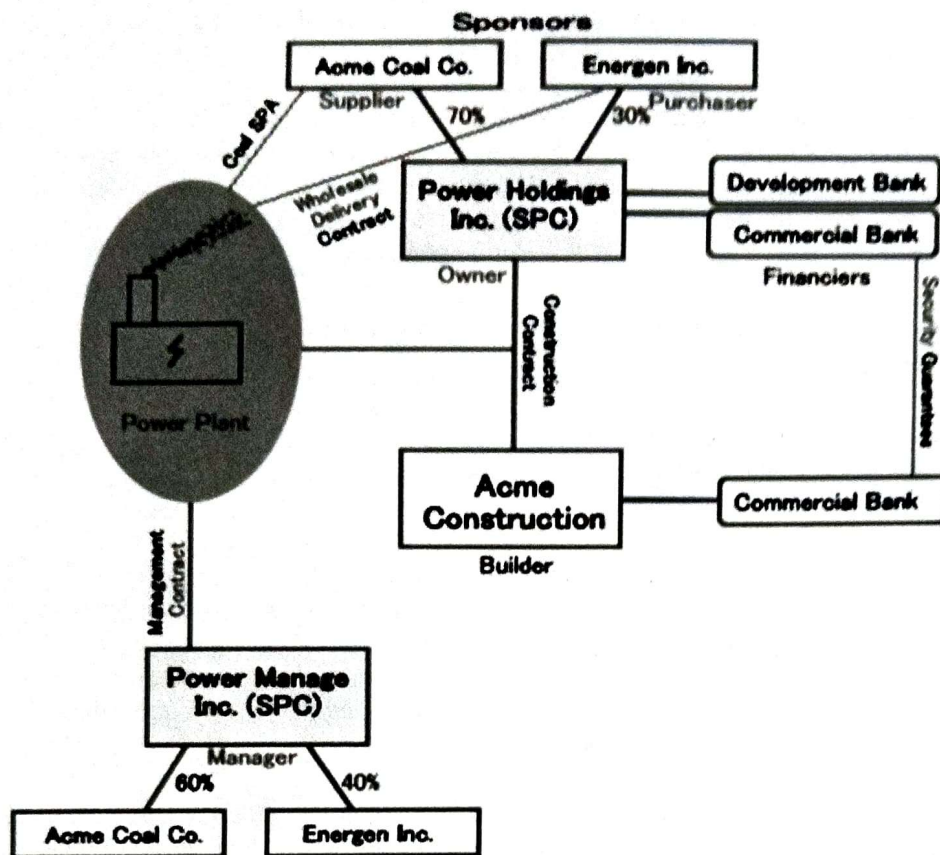


Fig. 1.A typical structure of Infrastructure Project Financing

Need of Infrastructure Project Finance

Project finance structure for infrastructure is built on the following concepts which differs from industrial projects

1. Project finance is a finance structure which ensures that the projects are environmentally, socially, economically and politically viable.
2. Traditional methods are not suitable for projects which have a long life and require huge capital investment.
3. Risk sharing is another unique feature of project finance which traditional methods do not provide.
4. Project Finance improves the return on capital in a project by leveraging the investment
5. Project finance facilitates careful project evaluation & risk assessment

It is now well recognized that a country's development is strongly linked to its infrastructure strength. Infrastructure helps in determining a country's ability to expand trade, cope with population growth, and reduce poverty and a host of other factors that define economic and human development. Good infrastructure raises productivity and lowers production cost, but must also expand fast enough to accommodate growth. The precise link between infrastructure and economic development has been subject to extensive debate. The link between infrastructure and economic growth has been studied extensively in literature, the World Bank report (1991) of the World Bank for instance. The result shows that infrastructure development can have a significant impact on the economic growth. For low-income countries basic infrastructure such as water, irrigation, and to a lesser extent transportation is more important. As an economy matures into a middle-income category, their share of power and telecommunications in the infrastructure and investment increases. An estimate however shows that a 1% increase in infrastructure stocks is positively associated with a high growth in GDP across countries.

Infrastructure projects, which typically provide essential nature of its services, have one or more of the characteristics mentioned below:

- They are highly capital intensive
- They involve huge sunk costs
- They have a long operating life

Infrastructure is necessary but not a sufficient condition for growth. Adequate complements of other resources must be present as well. In developing countries like India, infrastructure development and financing has largely been the prerogative of the government. Since infrastructure is typically a natural monopoly, the government considered it necessary to keep control of the same, in public interest. The success and failure of infrastructure to meet the needs of the people is largely a story of the government's performance.

In the case of India, the government has taken great strides in improving the infrastructure stock of the nation since independence. However, when compared to developed countries we still have a long way to go. For instance, per capita power consumption in India is 282 KWH compared to 18,117 KWH for Canada. The situation has worsened in the 90's with frequent revisions being made to the Eighth plan document owing to the government's inability to bear the cost of infrastructure anymore. The simple truth is that public money is no longer sufficient to meet the burgeoning needs of the nation in line with its economic aspirations. Reluctantly, therefore, the government has to throw open the doors to private participation in infrastructure.

Infrastructure represents a strong public interest and so merits the attention of the government. The dominant role that the public sector has assumed in the infrastructure

- Recognition of the economic importance of infrastructure
- Belief that the problems with supply and technology require highly active intervention by the government
- Faith that the government could succeed where markets appear to fail

There is enough evidence to show that, despite significant growth in a number of developing countries infrastructure facilities have fallen far short of the requirements, though each sector has special problems, there are common patterns in the provision of infrastructure services and shortcomings such as:

- Operational deficiencies
- Inadequate maintenance

- Extensive dependence on fiscal resources
- Lack of responsiveness to the needs
- Limited benefits to the poor

Need for Increasing the Role of the Private Sector

In the mid 1980s evidence emerged in several countries that infrastructure services were not meeting the demand. Many governments have realized that the traditional state owned utility approach is no longer adequate. Although circumstances have varied and sectors, the shift towards greater private involvement has been driven by the need to provide better services to more people at a lower cost.

The main reason for a shift towards private infrastructure is the growing dissatisfaction with the public ownership monopoly and provision of infrastructure facilities. Under-investment by many state utilities has resulted in a back-log of unmet demand for infrastructure services: in many countries this is the principal constraint to growth. Power shortage has led to a shortfall in production, higher cost and decline in investment. Similarly limited availability and a poor quality of telecommunication have made it difficult for business in many developing countries to participate in the new international information based economy. Fiscal constraints faced by the governments and technological developments are other factors which have favoured increased private participation.

- Technology developments have reduced the natural monopoly characteristics that have allowed unbinding private entry and competition into many infrastructure services. Technology developments in many cases have helped to create more competitive pressures. For example: Containerization has facilitated competition in port services
- Falling costs of wireless telecommunications have enable small operators to compete with wire based network.
- Independent power producers can construct and operate relatively small plants at unit costs comparable to the large generators
- Contract based relationship (e.g. Build-Operate-Transfer, Build- Own- Operate - Concessions) have allowed private entry even within the existing regulatory network but with minor modifications.

Also, the private sector entry often sets up a pressure for further regulatory changes and sometimes competition may mitigate the need for close regulation. Private financing is expected to ease the burden of infrastructure borne by the government. More importantly it will encourage better risk sharing, accountability and management in infrastructure provision. The task for the future is to channel private saving directly to private risk bearers who make long term investments in institutions and financing instruments adapted to the needs of different investors in different projects. Unless these financing needs can be met the country will gain precious little from privatizing infrastructure.

INDIAN EXPERIENCE IN INFRASTRUCTURE FINANCING

Recently, banks have been very slow in disbursing funds. With respect to infrastructure projects, the Conditions Precedent to disbursements stipulated by banks is quite stringent. Despite completing all CPs, some of the banks are not disbursing funds, citing liquidity and market conditions. In case of new projects, banks are hesitant in taking up fresh exposures because of the following:

- Increase in cost of funds and consequent charging of higher rate of interest for infrastructure projects, say over 15%. At this interest rate, the infrastructure projects may not be viable. (The pricing for a reasonably well structured infrastructure project has moved up by approximately 300 bps in the current year. This is creating severe strain on the project costs and the projected cash flows.)
- RBI prescribed group exposure ceilings
- Asset-liability mismatches

Banks have also been reneging on the sanctioned terms, especially relating to interest rates agreed in the Loan Documentation. These include even loan documents executed in the current fiscal. Even if a couple of banks block disbursement, the entire disbursement schedule gets seriously disturbed. Banks are now stipulating variable interest rate formats, even during the construction period. This exposes the project to severe interest rate risk during construction and a consequent risk of shortfall in project financing. Banks are also now stipulating "credit rate spread" re-fixation after 2/3 years. This exposes projects to a lender driven unilateral interest rate risk. Several banks are already showing a significant dislike to process projects with tenor of the above 10-12 years.

The significant weakening of the Indian Rupee and the volatility in the Foreign Exchange markets has also caused a level of distress for financing infrastructure projects. Projects with import component have seen a significant rise in project costs, causing pressure on promoters and lenders to re-evaluate the project viability and financing. On account of the high volatility in the Foreign Exchange markets, banks have been asking for additional security for undertaking Forex Cover on exposed component of financing. This adds more strain in the project financing, since the entire security in the form of tangible assets and cash flows are charged to the funded lenders on a pari-passu basis. Recently some of the banks have displayed a credit aversion to the sector, driven by sectoral exposure, cost escalation and lower than budgeted revenue flows. A significant portion of the input costs like bitumen; cement etc has also been driven by higher prices. Similarly, several banks are now communicating an aversion to take large exposure in the power sector. Infrastructure projects that have predicated part of their equity funding from the capital markets (either through IPO or Private equity deals) are facing a level of uncertainty, where part of disbursements from banks have already commenced for several projects, further disbursements are now delayed by the banks, subject to promoters demonstrating complete tie up.

Key Project Parties

As the project moves from the development stages to financing stage and thereafter to construction and finally to operation, several project parties get involve into with the project. Some like the financial advisors exit once the financing is fully tied up and he project has drawn some loan from the lenders and equity from the investors, while others like the EPC contractor are extensively associated with the project during the construction phase and by contract during the "Defect Liability Period" post commercial operations. A brief description of each of the parties and their typical role is given below.

There is a growing realization in many developing countries of the limitations of governments in a managing and financing economic activities, particularly large infrastructure projects. Provision of infrastructure facilities, traditionally in the government domain, is now being offered for private sector investments and management. This trend has been reinforced by the resources crunch faced by many governments. Infrastructure projects are usually characterized by large investments long gestation periods, and very specific domestic markets.

Project Parties	Fundamental Responsibilities
Project Sponsors	Project Sponsors are responsible of converting a concept into a project and having a role in setting up a project vehicle, identifying and recruiting right managerial talent to implement and run the project, providing a clear mandate to such management on their expectations, and finally subscribing to a significant proportion of equity in the project vehicle.
Project Vehicle	The SPV is responsible for delivering a bankable project during the financing phase, implementing the project, and thereafter operating it in a manner that is financially viable. Its elects and appoints all the project contractors, negotiates and executes the contracts, arranges the financing, supervisors construction and commissioning, and operates the project either directly or through an Operations and Maintenance (O&M) Contractor.
Project Lenders	Project Lenders provide debt to finance the construction of the project. Typically a consortium of project lenders, led by a "Lead Bank ", ascertains a bankable project cost and in consultation with the special Purpose Vehicle (SPV) and the project sponsors develops the patterns of financing the same, disburses debt, and performs a monitoring role during the construction phase, and on commissioning monitors the performance and operation of the project till all debt is repaid. Project lenders are generally secured by project assets and do not normally interfere in the day to day operations of the SPV. However, under conditions of default, the project lenders' right increase substantially and in the extreme cases of default, and if provided for in the Project Loan Documents, project lenders can take over the management of the project as well as sponsors' equity.
EPC Contractor	Typically an EPC contractor designs the project, procures all the engineering skills and equipment to construct the project, erects all the project facilities, ensures that test and trial-runs are completed, and finally commissions the project, all on a turnkey basis. The EPC contractor's key objective is to deliver a project, as per pre-defined specifications, within a certain cost and time frame. It also provides performance guarantees to the SPV. It may choose to sub-contract certain portions of the assignment to other contractors but sub-contracting does not relieve it from its sole responsibility of delivering a constructed project to the SPV.
O&M Contractor	As the name indicates, the O&M contractor is responsible for operating and maintaining the plant in line with industry best practices. Performance parameters that need to be achieved during operations are pre-defined in an O&M contract and the O&M contractor provides managerial skills and operations experience to achieve and possibly surpass the agreed parameters.
Government	Te government is a key project party. It provides a concession to the SPV to set up the project and ensures that a proper legislative and regulatory framework exists that allows the concerned SPV to compete on a "level playing field" along with existing, possibly government owned entities, in the same field. In some cases, like in the electricity generation sector, state government has counter guaranteed the performance of the state government.

In project financing the project, its assets, contracts, inherent economic and cash-flows are separated from their promoters or sponsors in order to permit credit appraisal and loan to the project, independent of the sponsors. The assets of the specific project serve as collateral for the loan, and all loan repayments are made out of the cash of the project. In this sense, the loan is said to be of non-resource to the sponsors. Thus, project financing may be define as the scheme of 'financing of a particular economic unit in which 1 lender is satisfied in looking at the cash flows and the earning of that economic unit as a source of funds, from which a loan can be repaid, and to the assets of the economic unit as a collateral for the loan. In the past project financing was mostly used in oil exploration and other mineral extraction through joint venture with foreign firms. The most recent use of project financing can be found in infrastructure projects, particularly in power and telecommunication projects. Project financing is made possible by combining undertaking and various kinds of guarantees by parties who are interested in a project. It is built in such a way that no party has to assume the full credit responsibility of the project. When all the undertakings are combined and reviewed together, it results in an equivalent of satisfactory credit risk for the lenders. It is often suggested that the project financing enables a

parent company to obtain inexpensive loans without having to bear all the risk of the project. This is not true, in practice, the parent company is affected by the actual plight of the project, and the interests on the project loan depend on the parent's stake in the project. The traditional form of financing is the corporate financing or the balance sheet financing. In this case, although financing is apparently for a project, the lender looks at the cash flows and assets of the whole company in order to service the debt and provide security as explained in the diagram given below:

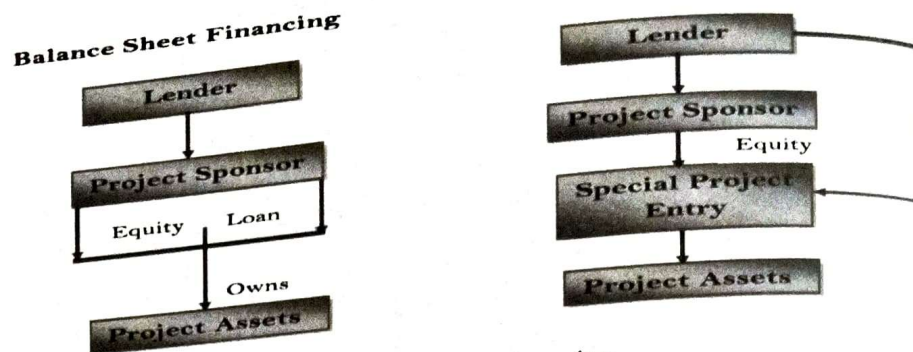


Figure-2: Project Financing

The following are the characteristics of project financing:

- A separate project entity is created that receives loans from lenders and equity from sponsors. The components of debt are very high in project financing. Thus, project financing is highly leveraged financing.
- The project funding and all its other cash flows are separated from the parent company's balance sheet.
- Debt services and repayments entirely depend on the project's cash flows. Project assets are used as collateral for loan payments.
- Project financiers' risks are not entirely covered by the sponsor's guarantees.
- Third parties like suppliers, customers, government and sponsor's commit to share the risk of the project.

Project financing is most appropriate for those projects, which require large amount of capital expenditure and involve high risk. It is used by companies to reduce their own risk by allocating the risk to a number of parties. It allows sponsors to:

- Finance large project then the company's credit and financial capability would permit.
- Insulate the company's balance sheet from the impact of the project.
- Use high degree of leverage to benefit the equity owners.

Project Financing Arrangements

(a) The Build-Own-Operate-Transfer (BOOT) Arrangement

The Build-Own-Operate-Transfer (BOOT) is essentially an extension of the project financing concept. It is a special financing scheme, which is designed to attract private participation in financing, constructing and operating infrastructure projects. In BOOT scheme, a private project company builds a project, operates it for a sufficient period of time to earn an adequate return on investment, and then transfer it to the host government or its agency. Quite often, the value of efficiency gain from private participation can outweigh the extra

cost of borrowing through a BOOT project, relative to direct government borrowing. BOOT projects can be either solicited or unsolicited. When proposals are solicited, the project is identified and formulated by the government and the private sector is invited to submit unsolicited proposals on their own accord. The private group usually consists of international construction contractors, heavy equipment suppliers, and plant and system operators along with local partners. BOOT projects have been implemented or are in the process of being implemented in many developing countries. Power and the roads are the two sectors with the largest number of projects. BOOT projects have also been implemented for ports and mass transit and rail. There have been only a few BOOT projects in the telecommunication sector in Thailand and Indonesia. According to World Bank Study, the reason why BOOT schemes have not been popular in the telecommunication sector is the potential complexity associated with co-ordinating the BOOT operator's distribution networks with those of the state-owned incumbent, issues involving interconnections, sharing of ducts, maintenance and new investments, all must be resolved. These factors tend to increase risks for investors, make management co-ordination harder, and raise the questions for investor as to whether they will have adequate control over the facilities which they have invested to achieve appropriate levels of productivity.

(b) Build-Own-Operate (BOO) Arrangement

The issue of "transfer" (the T in BOOT projects) is ambiguous because most of the BOOT projects under operation or construction have the transfer dates quite far away and, therefore, they are not a real concern as yet. One problem with the transfer provision is the likelihood of the capital stock of the project being run down as the date of transfer draws nearer. This may take place in spite of legal arrangements, which includes inspection plans and other such measures. In any case, there does not seem to be any rational for such a transfer if the very basis of the projects was to run it outside the public sector. One alternative to transfer that has been suggested is for the foreign shareholders to divest themselves of their equity either entirely or up to some negotiated percentage at the end of the stipulated time period. Such an arrangement is generally referred to as the build-own-operate (BOO) arrangements.

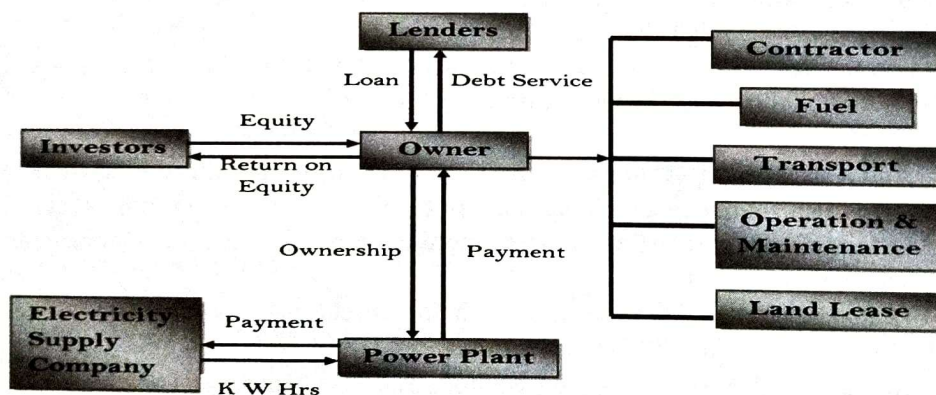


Fig. 3 BOOT/BOO structure of Power Plant

(c) Build-Lease-Transfer arrangement

In the build lease transfer arrangement, the control of the project is transferred from the project owners to a lease. The shareholders retain the full ownership of the project, but, for operation purposes, they lease it to a lessee. The host government agrees with the lessee to buy the output or service of the project. The leaser receives the lease rental guaranteed by the host government.

Public Private Partnership (PPP)

Infrastructure shortages are proving a key constraint in sustaining and expanding India's economic growth and ensuring that all Indians are able to share in its benefits. More than \$500bn will be required to fund infrastructural development in India over the next five years. However, the scope for making improvements on this scale is fundamentally constrained by the state of public finances.

Responding to this challenge, the Government of India is actively promoting the expansion of Public Private Partnership (PPP) activities across all key infrastructure sectors including highways, ports, power and telecoms. To date, various PPP models have been tried in India, including public contracting; passive public investment (equity, debt, guarantee, grants); joint ventures; and long-term contractual agreements (BOT, BOOT, BOLT). Regardless of the model pursued, however, the overwhelming consensus is that PPPs are the primary means by which the Government of India will seek to overcome the 'infrastructure deficit'.

What is a Public Private Partnership?

There is no widely accepted definition of a Public Private Partnership (PPP). It can be understood perhaps more simply as a method of "infrastructure financing." In broad terms, PPP refers to an arrangement between the public and private sectors with clear agreement for the delivery of public infrastructure and/or public services. Infrastructure projects often require huge investments and expertise which public authorities are not always able to provide. Infrastructure finance projects enable public bodies such as governments or municipal authorities to raise money quickly and also access knowledge for the timely and successful delivery of public services. In many countries, PPPs are now a central feature of ongoing efforts to modernize public services and infrastructure.

The most successful partnership arrangements draw on the relative strengths of both the public and private sector in order to establish complementary relationships between them. Where traditional procurement models begin with the question of what assets the public body has at its disposal and how these might be used to deliver required services, PPP arrangements place the emphasis on the desired service or outcome as identified by the public organization and how the private sector might help to make this happen.

- Adopt standard concession agreements for PPP projects in defined infrastructure sectors
- Adopt competitive bidding procedure for bidding and awarding of infrastructure projects under defined rules and procedures according to best international commercial practices and GOI guidelines
- Designate a State-level dispute resolution mechanism for the speedy resolution of disputes relating to PPP projects
- Adopt formal State policies on environment, resettlement and social safeguards with respect to the implementation of infrastructure projects, according to best international commercial practices.

Advantages of PPP

- Help the participating State to implement PPP schemes effectively and efficiently
- Enhance capacity of PPP cells in participating entities to prepare, evaluate and appraise PPPs in infrastructure.

- Significantly improve monitoring of overall progress in PPPs in infrastructure at both central and state levels through well-knit databases.
- Increase awareness among potential private sector partners about the project cycle of PPP projects in infrastructure and the expectations of Government with respect to value for money.
- Over the long term, an increase in private sector participation in infrastructure development and management throughout the country. The most important advantage of public private partnership is to creation of value for money. This means delivering a project with the same quality as under conventional procurement for less money, or delivering a project with the superior quality for the same amount of money viz., Risk Transfer. Risk will be transferred to the party which is best able to manage this risk and at the least cost. Risk transfer ensures that the parties involved will use conservative assumptions in developing their expectations of benefits and cost.
- Competition:
Generally the benefit of introduction of competition to an area which is normally dominated by public sector monopolies are: lower prices, greater innovation, increased investment and better service. Government has a wide range of options for creating competitive procurement: Service contracting, management contracting, leasing and concessions. The construction and maintenance of public assets have always been done by the private sector; the difference of PFI has brought, is that it integrates all the activities, including project management, so there is a single competition rather than several. It's important to realize the trade-off between competition and the length and cost of negotiations. The best way to ensure competition is for the government to clarify as early as possible in the process the outputs which are wanted, to avoid the need for too many changes as the negotiations proceed.
 - Cost efficiencies:
PPP can lead to cost efficiencies, which are the results of increased competition, an improved proportion of risk transfer, a closer integration of the different aspects of a project, better or whole life costing and improved innovation. Significant cost savings can be obtained in the long run by integrating capital investment and the delivery of services, because maintenance will be considered when the assets is designed to maximize efficiency. Another reason for the creation of efficiencies is the departure from standards.
 - Reduction on the public treasury
PPP help to reduce the capital demands on the public treasury for infrastructure development. PPP will give the government more freedom to spend on other non-infrastructure investments in the short term. However, one has to realize that the PPP are actually posting bills to the future.
 - Improved cost calculation:
Because of the PPP, improved cost calculations will result the sunk cost, cost which the government isn't used to take into account when making cost estimates, will become visible.

Limitations of PPP

1. Higher Transaction Cost:
PPPs represent opportunities to reduce total project cost. However, tendering costs and developing costs are usually much higher than the conventional procurement. The procurement costs appear to be higher because PPP projects are often unique and have to anticipate up to 30 years of external events and circumstances. PPP contracts are much more complicated to negotiate and administer than the traditional construction contracts, partly because there are more actors involved. That's why they require more time, effort,

complexity of contracts forms and additional experts. The transaction cost will increase with the complexity of relations and duration of such relations.

2. **Higher Capital Cost:**
PPP will also result in higher capital cost because of private borrowing. The additional cost of private finance is – in general – approximately up to 2%.
3. **Insecurity:**
Whenever two or more parties enter into a contract, there is a risk that the administrative efforts on each side will be frustrated by a lack of co-operation on the part of the other party. Also, when party enters into a tender procedure, the party may not even be granted the concession. Because of these insecurities, the number of bidders may be limited and thereby reducing the competitiveness of the tender process.⁴
4. **Inefficiencies:**
Long-term operating contract can lead to value for money. However, they can also lead to inefficiencies due to lack of contestability and competition. The tender-process at the beginning of the process may have introduced competition; the developer who has signed the contract will have exclusive rights to infrastructure facility, therefore practically enjoying a monopoly. During the operation phase inefficiencies may be created due to in contestability and competition.
5. **Culture Gap:**
There exists a cultural gap between the public and the private sectors, which may result in also of confidence in each other. The private sector's motive to take part in a PPP is primary profit making or image building; the public sector motive is merely social attractiveness. Another example of this culture gap is the different discount rates use by the private and the public sector, which can be explained by the difference in motive involved in both the parties. In order to let the discount rates be comparable, and thus reduce the cultural gap, the public discount rates have to be adjusted to the private discount rate. Unfair and unrealistic cost comparison procedures can contribute to slow implementation or even failure of PPP, thereby raising transaction cost.
To overcome the gap in culture, trust is one of the most important aspects in a partnership, without trust, real success is hard to realize. The public sector as well as the private sectors, have to respect and comprehend each other goals, consideration and decisions.
6. **Short term rigidities:**
A PPP can be compared to a network. Durable network create stability and lower the uncertainty of sectors. At the same time this also means rigidities, dependencies and inability to adapt to changed conditions. That's why PPP-contracts should allow for changes to take place and prices benchmarked or market-tested from time to time.
7. **Hold-up problem**

Another disadvantage of PPPs is the existence of the hold-up problem, whereby a party may be able to enforce a new cost-revenue-ratio than previously agreed upon. This problem may take place when the negotiation problem may take place when the negotiation-position of the parties involved change over time and when observance of the contract isn't perfectly possible. The relative position of negotiation is influenced by the sunk cost aspects of investments and the alternative possibilities of usage.

RECENT TRENDS IN INFRASTRUCTURE FINANCE IN INDIA

The Government of India defines PPPs as:

'A partnership between a public sector entity (sponsoring authority) and a private sector entity (a legal entity in which 51% or more of equity is with the private partner/s) for the creation and/or management of infrastructure for public purpose for a specified period of time (concession period) on commercial terms and in which the private partner has been procured through a transparent and open procurement system' (Department of Economic Affairs, Ministry of Finance: DEA).

PPP Characteristics:

1. PPPs do not mean reduced responsibility and accountability of the Government.
2. The Government remains accountable for service quality, price certainty and cost-effectiveness (value for money) of the partnership.
3. Government's role is one of facilitator and enabler by assuming social, environmental and political risks; private partner's role is one of financier, builder and operator of the service or facility and it typically assumes construction and commercial risk.
4. Resources required by the project in totality along with the accompanying risks and rewards/returns are shared on the basis of a pre-determined, agreed formula, which is formalized through a contract. Since the private sector assumes the risk of non-performance of assets and realizes its returns if the assets perform, the PPP process involves a full scale risk appraisal. This results in better cost estimation and better investment decisions.
5. PPPs deliver efficiency gains and enhanced impact of the investments. PPP projects also lead to faster implementation, reduced lifecycle costs and optimal risk allocation. Private management also increases accountability and incentivizes performance and maintenance of required service standards. Finally, PPPs result in improved delivery of public services and also promote public sector reforms.
6. PPP does not involve outright sale of a public service or facility to the private sector.
7. Private Sector Company in a PPP means a company in which 51% or more of the subscribed and paid up equity is owned and controlled by a private entity.
8. Worldwide most common partnership options are:
 - a. Service Contract
 - b. Management Contract/Lease
 - c. Build Operate Transfer
 - d. Concession
 - e. Joint Ventures
 - f. Community based provision

Most contracts take the form of 'concession' and 'Design, Build, Finance and Operate' contracts. These contracts are usually financed by user fees or tariffs or by government subsidies.

INFRASTRUCTURE CHALLENGE: THE ROLE OF PPP

It has been observed worldwide that it is difficult for the private sector to meet the financial requirements of infrastructure in isolation at the same time tackling the risks inherent to building infrastructure. Therefore, the PPP model has come to represent a logical, viable and necessary option for the Government and the private sector to work together.

Public Private Partnership project as per Government of India means a project based on a long term contract or concession agreement, between a Government or statutory entity on the one side and a private sector company on the other side, for delivering an infrastructure service on payment of user charges. The concession agreement is specifically targeted towards financing, designing, implementing and operating infrastructure facilities and the collaborative ventures are built around mutually agreed allocation of resources, risks and returns.

A list of the significant PPP in several sectors/states is given below:

In India most PPPs have been restricted to the roads sector. The US \$ 100 million Delhi-Noida bridge project, implemented on a BOOT framework on the basis of a 30 year concession, is India's first major PPP initiative.

The Jaipur-Kishangarh highway is a Build Operate Transfer (BOT) success story and it has been decided that the four lanes of 10,000 kms, under NHDP III will be done entirely on BOT basis.

Then there are successful PPPs in water supply. The Tirupur project in Tamil Nadu is a shining example. It is a BOOT project and an SPV was set up for the purpose. The project however took more than ten years from concept to financial closure. Many other PPPs in water supply have been financed through municipal bonds in cities such as Ahmadabad, Ludhiana and Nagpur.

The housing projects coming up on the outskirts of Kolkata City are a good example of what a PPP model can deliver in terms of quality housing and living conditions to middle and lower middle class. Gujarat and Maharashtra have had success especially in ports, roads and urban infrastructure.

Karnataka also has done well in the airport, power and road sector. Punjab has had PPPs in the road sector. As per a World Bank financed and DEA commissioned study by Pricewaterhouse Coopers, in the last 10 years a total of 227 PPP infrastructure projects were found to have achieved financial close. Furthermore, PPP projects in India clearly show a sharp increasing trend in the past 10 years. Out of the 227 PPP projects, more than 117 projects have achieved financial close in the last three years. Road sector which forms more than 81% of the total projects by number accounts for only 54% of the total projects by value. Port and Airport projects which form 8.4% and 1.8% respectively by number constitute 21% and 17.2% respectively of the pie by value. Western region followed by Southern region dominates both in terms of number and value of projects. Though states dominate in terms of the number of PPP projects awarded (55%), they trail the centre in terms of the total value of the projects (centre accounting for 72%). This is because most state project sizes are less than \$50 million but central project sizes; in particular Airport projects are large being more than \$100 million.

MEASURES TAKEN TO ENCOURAGE PPP

In airports and ports sectors, Model Concession Agreements are being developed to encourage public private partnerships. Planning Commission has already drafted the Model Concession Agreement for the Roads sector. At the same time, public investments are being stepped up, coupled with revamping of Airports Authority of India (AAI), National Highways Authority of India (NHAI) and Port Trusts. The core group on NHDP Financing has submitted its report on the suggested financing pattern for NHDP. The report of the IMG on restructuring of NHAI has been finalized. A Task Force appointed by Committee on Infrastructure has finalized the financing plan of ports.

In the railway sector, a number of projects are being funded by public private partnership, State Government participation, funding of projects of national importance through the general exchequer and multi-lateral funding. Ministry of Railways has formed a PSU, the Rail Vikas Nigam Limited (RVNL). RVNL has been entrusted with the task of promoting public private partnership for railway projects. Railways have also decided to set up dedicated freight corridors on Delhi-Howrah and Delhi-Mumbai routes. This project is likely to be financed through non-railway funding in the form of bilateral, multi-lateral funding, etc. Decision has been taken to allow private parties to participate in container services, hitherto the preserve of CONCOR. A model concession agreement has been finalized by the IMG constituted for this purpose.

The Task Force on financing of the development and modernization of 35 non-metro airports has finalized its report. The Task Force has also recommended that the city side development in all airports should be taken up through PPPs.

Efforts at the Central Government and State Level:

Recognizing that strengthening the capacities of different levels of government to conceptualize, structure and manage PPPs will lead to more and better PPPs, DEA is facilitating mainstreaming PPP through Technical Assistance from ADB. The primary objective is effective institutionalization of the PPP cells to deliver their mandate through provision of 'in house' consultancy services to each of the selected entities at the Centre and State level.

Technical Assistance:

The selected entities will be provided assistance for a period till December 2009 in the form of:

- One PPP Expert on an individual basis focusing on project financial analysis and risk management
- One Management Information Systems expert focusing on information management.
- A panel of three legal experts on retainer basis to provide legal expertise on PPPs.

Eligibility:

- The States wishing to avail this Technical Assistance are required to enter into an MOU with DEA detailing steps that would be taken to promote PPPs in the State.
- The MOU requires the State Government to:
 - Set up a PPP cell as the nodal agency for processing all PPP projects in the State with a designated PPP Nodal Officer and defined scope of work
 - Develop a robust shelf of projects amenable for PPPs and adhere to the following set of targets on the level of PPPs in the State:
 - During 2007-08 bid out at least 3 projects with a total cost of Rs. 750 cr or more in at least two sectors
 - During 2008-09 bid out at least 5 projects with a total cost of Rs.1250 cr or more in at least three sectors
 - During 2009-10 bid out at least 5 projects with a total cost of Rs. 1500 cr or more in at least four sectors commit to establish such policies and regulatory and governance

EMERGING ISSUES: IS PPP A SOLUTION OR PANACEA?

Indian economy has been experiencing unprecedented growth in almost all sectors. With an average GDP target growth of 10 percent in the 11th Five Year Plan period, India requires robust

infrastructure of railways, roads, ports, airlines, urban transport, public health and other sectors, Infrastructure being a fundamental of any countries growth require huge amount of investment. Over the years, Government of India has been providing infrastructure through budgetary provisions. This led to inadequate public expenditure on infrastructure, leading to significant deficit in the physical infrastructure, thereby hindering economic development. In today's scenario it is difficult for the government to manage infrastructure financing alone, hence, they opened the door for private sector.

Private Sector gets an opportunity to exploit. Public Private Partnership has become a catchword which is must for countries inclusive growth. Both the government and private players have realized the virtue of joining hands for mega infrastructure projects. Mobilizing money from the capital market has become easier. In any PPP mode, while the private sector is responsible for designing, financing, building, and operations of the services, the public sector provides a legislative frame work and institutional support. While the public sector has realized the need for extra adrenalin to keep itself relevant, the private sector has gain enough muscle to perform the task it was scared of performing. The decision whether to proceed with a PPP rather than with a conventional procurement process turns principally on the following three questions:

1. Is the public agency able to specify outcomes in service level terms, thereby leaving scope for the PPP consortium to innovate and optimize?
2. Is it easy for the public agency to specify outcomes in a way that performance can be measured objectively and rewards and sanctions applied?
3. Are the public agency's desired outcomes likely to be durable, given the length of the contract?

If the answer to any of these three questions is "no", then conventional procurement is likely to be preferable to a PPP. Our discussion built on the above leads us to conclude that the PPP is beneficial for both public and private sector as well for the people of country. **Thus PPP in infrastructure financing has emerged as a constructive solution for building and developing the economy and not merely as a panacea.**

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Consumer Novelty Seeking (CNS) and Adoption of E-Banking Technology

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Abstract

The major problem with the banks, which have already invested huge amounts in their online initiatives (such as E-banking), is that their online offerings enjoy a little patronage. Banks are wondering about the course of action to enhance customer preference for online channels for obtaining banking services. Customers, on the other hand, do not prefer to adopt e-banking for various reasons related to service providers. Some of the reasons include complexity of use, security, delay in signing up, and non-compatibility. Research studies conducted in the past have confirmed some association between adoption of e-banking by the customers and their demographics (age, gender, marital status, education, occupation, and income). A very few studies have really concentrated on the association of psychographics and personality traits with the adoption of e-banking. The present study attempts to explore the relationship between the Consumer Novelty Seeking (CNS) and their demographics and the association between the CNS score and the consumer adoption of e-banking technology.

Key Words: Consumer Novelty Seeking (CNS), E-banking, Adoption of E-banking

OVERVIEW OF E -BANKING SYSTEM

India is still in the early stages of E-banking growth and development. Competition and changes in technology and lifestyle in the last five years have changed the face of banking. The changes that have taken place impose on banks tough standards of competition and compliance. The issue here is – 'Where does India stand in the scheme of E-banking.' E-banking is likely to bring a host of opportunities as well as unprecedented risks to the fundamental nature of banking in India.

The impact of E-Banking in India is not yet apparent. Many global research companies believe that E-banking adoption in India in the near future would be slow compared to other major Asian countries. Indian E-banking is still nascent, although it is fast becoming a strategic necessity for most commercial banks, as competition increases from private banks and non banking financial institutions. Despite the global economic challenges facing the IT software and services sector, the outlook for the Indian industry remains optimistic.

The Reserve Bank of India has also set up a "Working Group on E-banking to examine different aspects of E-banking. The group focused on three major areas of E-banking i.e. (1) Technology and Security issues (2) Legal issues and (3) Regulatory and Supervisory issues. RBI has accepted the guidelines of the group and they provide a good insight into the security requirements of E-banking. The importance of the impact of technology and information security cannot be doubted. Technological developments have been one of the key drivers of the global economy and represent an instrument that if exploited well can boost the efficiency and competitiveness of the banking sector. However, the rapid growth of the Internet has introduced a completely new level of security related problems. The problem here is that since the Internet is not a regulated technology and it is readily accessible to millions of people, there will always be people who want to use it to make illicit gains. The security issue can be addressed at three levels. The first is the security of customer information as it is sent from the customer's PC to the Web server. The second is the security of the environment in which the Internet banking (IB) server and customer information database reside. Third, security measures must be in place to prevent unauthorized users from attempting to log into the online banking section of the website.

Banks in India have therefore realized that technology strategy has become the corner stone of their business strategy and it provides totally new ways of effecting customer transactions and interactions (Godse, 2005).

The Indian banks have been providing retail-banking services to their customers through various electronic channels such as:

- 1) Self Service Terminals (ATM- Automated Teller Machine),
- 2) Telephone cum Fax (Tele-banking),
- 3) PC- Personal Computer (PC Banking & Internet Banking), and
- 4) Mobile Phone (Mobile Banking).

The E-Banking is not limited to the cash withdrawal or funds transfer from one account to another. It includes all electronic platforms ranging from self-service terminals to Internet and cell phones. This is a bouquet of all banking information or services that a customer desires from a financial organization (Singh, 2002). The E-Banking means different facilities to the various users. Here users may be classified as bank customers and employees. Further there is categorization of customers into Individual Customers and Corporate Customers. Similarly the bank employees are divided into various categories of users as per their job nature and positions in all the three levels in the management such as Chairman, CEOs (Chief Executive Officers), Managing Directors, Regional/ Zonal/ Branch Managers, System Administrators, DBA (Database Administrator), Programmers and Data Entry Operators/Clerks etc.

The Internet banking (IB) is a part of the Electronic Banking (E-Banking). The main difference between E-Banking and Internet Banking is the mode of delivery channels i.e. the use of Internet. Although E-Banking and Internet Banking have many things in common but Internet being a public domain requires many additional security measures (RBI, "Internet Banking", 2005).

"E-Banking is not a banking product; rather, it describes the way transactions are conducted. E-Banking may be understood as a catch -all term which covers the different ways of transacting banking business electronically. The terms- PC banking, online banking, internet banking, telephone banking or mobile banking refer to a multitude of ways in which customers can access their banks without having to be physically present at a bank branch. Nowadays, in fact banks are

involved in E-Commerce in a variety of ways, including cooperation with internet service providers (ISPs), the issuing of e- money or the execution of payments etc." (Deutsche Bundesbank, 2000).

The Internet Banking permits the customers to avail banking service from any place whether it is cyber café, home or office via Internet. The Internet Banking has become more than just a form of PC banking that is traditionally availed through personal computer. Due to latest innovation in Information Technology (wireless communication) and diffusion of technology, the Internet Banking is available on mobile phones, Personal Digital Assistants (PDAs) or small hand-held PCs etc. (Deutsche Bundesbank, 2000). The increasing use of mobile phones as a media of communications has been forcing the banks to use it as a service delivery channel. The customer is able to avail majority of banking services by his/her mobile phone irrespective of time and place. The mobile banking is a vivid example of how the lines between various forms of E-Banking are becoming increasingly blurred (Deutsche Bundesbank, 2000).

E-banking offers vast opportunities, yet even less than one in three banks have an E-banking strategy in place. According to a study, less than 15 percent of banks with transactional websites will realize profits directly attributable to those sites. Hence, banks must recognize the seriousness of the challenge ahead and develop a strategy that will enable them to leverage the opportunities presented by the Internet.

In the fast-paced economy, banks have to keep up with the constantly evolving business models and technology innovations of the Internet space. Early e-business adopter like Wells Fargo not only entered the E-banking industry first but also showed flexibility to change as the market developed. Not many banks have been as e-business-savvy. But the pressure is now building for all banks to develop sound E-business strategies that will attract and retain increasingly discriminating customers.

The major problem with the banks, which have already invested huge amounts in their online initiatives, is that their online offerings remain unprofitable. Though banks have enrolled some existing customers in their online programs, they are not getting customers in large numbers. This has made banks wonder whether there is any value in the online channel. Just enrolling customers for online banking may not be sufficient until and unless they use the site actively. Banks must make efforts to increase their site usage by customers and effectively co-ordinate the online channel with branches and call centers. Then only they will be able to derive maximum value that includes cost reduction, cross-selling opportunities, and higher customer retention.

Customers do not prefer to adopt e-banking for various reasons. Some of these reasons include usability features of the site, concerns about security and frequent complaints that signing up is complicated and time-consuming. Banks can solve these problems by refocusing investment on improving the site's basic functionality and user-friendliness, and avoiding advanced features that most customers neither understand nor value. Developing advanced features that appeal to a relatively small numbers of customers, creates far less value than strengthening core capabilities and getting customers to use them. Banks must make efforts to familiarize customers with their sites and show them how easy and efficient the online channel is to use.

LITERATURE REVIEW

According to Indian Banking Regulation Act, 1949, [Section 5(2)], Banking is defined as "accepting, for the purpose of lending or investment, deposits of money from the public,

repayable on demand or otherwise and withdrawable by cheque, draft, order or otherwise." According to Japanese Banking Act, 1927, "Bank means an institution which can perform an activity to give and receive the credits". Sharma (2007), defines electronic banking as "providing banking service to customer at his/her office/home or at any other place or time wherever the person is- be it traveling, shopping or even in a stadium through the usage of electronic technology".

Several studies have been carried out covering the aspects related to use of technology by customer availing banking services, adoption of e-banking, and the factors influencing the adoption e-banking.

An empirical investigation conducted on the adoption of online banking services among European citizen (M.M.Guerrero in his paper titled "*Profiling the adoption of Online banking Services in the European Union*") revealed that the use of e banking services was explained on the basis of socio-demographic and Internet – specific behavioral indicators. The study found the support for the influence of country, age, profession and several Internet behaviors on the use of E-banking. On this issue, Stewart (1999) claimed that the failure of the Internet as a retail distribution channel has been attributed to the lack of trust consumers have in the electronic channel and in the web merchants.

El-Sherbini et al. (2007) investigated the customers' perspectives of IB, their perceived importance for it, usage patterns and problems rising on its utilization in an empirical study conducted in Kuwait. The study focused on the perceived importance of IB services by customers, current and potential use of IB services in Kuwait and problems perceived by bank customers in using IB. According to the study, top five important services sought by the customers: "Review account balance", "Obtain detailed transactions histories, "Open accounts", "Pay bills" and Transfer funds between own accounts".

Marshall and Heslop (1988) found that consumers' motives for use of technology were useful for predicting subsequent usage. Demographic factors such as higher **education** levels and **employment** status were positively related to usage of ATMs, whereas **age of the users** was negatively related to adoption of ATMs. Eriksson et al. (2005) studied the technology of Internet banking in Estonia, an emerging east European economy. The study focused on usage of and attitudes towards the Internet as a banking channel. It concluded that the perceived usefulness of IB is, for banks, a key construct for promoting customer use. Sathye (1997) reviewed the status of Internet banking in Australia and found that only two of the 52 banks started Internet banking services. He opined that education would be a crucial factor for expanding Internet banking in Australia. In another study, Sathye (1999) analyzed the factors affecting the adoption of Internet banking by Australian consumers. The findings suggest that security concerns and lack of awareness about Internet banking and its benefits stand out as being the obstacles to the adoption of Internet banking in Australia. He also suggests some of the ways to address these impediments. Further, he suggests that delivery of financial services over the Internet should be a part of overall customer service and distribution strategy. These measures could help in rapid migration of customers to Internet banking, resulting in considerable savings in operating costs for banks.

Mattila (2001) found out in a study conducted in Finland that typical users of Internet banking were **well-educated male professionals** between the **ages of 35 to 40**. Elderly people especially females over 50 were reluctant to use the Internet banking service. Elderly people associated a bank transaction with human transaction. Mattila et al. (2003) in another study conducted among mature customers in Finland found that they are late adopters with more than 75 % of them having

never used Internet banking. The reasons for non-adoption are problems in using e- banking, expensive start up costs, security aspects and lack of personal services. In a study conducted in Turkey, Akinci et al. (2004) examined the distinguishing demographic, attitudinal and behavioral characteristics of Internet banking users and non-users. It was found that there were significant differences between the two groups with respect to demographic profiles and attitudes along with different service channel preferences. Users were **mid-aged male**, more **technology-oriented** and **convenience minded** consumers. It also segmented the Internet banking service users into 'speed seekers', 'cautious users' and 'exposed ones'. Filotto et al. (1997) illustrated that the adoption rates of ATM were higher among **young users**. In addition, Barnett (1998) findings proved that **younger consumers** are more comfortable in using e-banking. Katz and Aspden (1997) findings explained that **males** were more likely to adopt e-banking than females.

Laforet and Li (2005) examined demographic, attitudinal and behavioral characteristics of online and mobile bank users in China. Their findings showed that unlike in the west, level of education and age did not influence online/mobile-banking adoption. More **males** were using them, and of the urban population surveyed 33% and 14% respectively were using online banking and mobile banking. Lack of usage by non-users was because of factors like perceptions of risk, lack of computer and technological skills along with the Chinese tradition of cash-carry banking.

Wan et al. (2005) in their study among Hong Kong bank customers found that ATM was the most frequently adopted channel, followed by Internet banking and branch banking, and telephone banking was the least frequently adopted. Beliefs about possession about certain positive attributes of the channels were predictive about the adoption of ATM and Internet banking than adoptions of branch banking and telephone banking. Demographic factors were associated with the adoption of all channels except ATM. One of the most important implications from the research was that the Theory of Reasoned Action was found to be less predictive in habitual behaviors as in the case of branch banking and telephone banking.

Mishra (2005) in his paper explained the advantages and the security concerns about Internet banking. According to him, improved customer access, offering of more services, increased customer loyalty, attracting new customers are the primary drivers of Internet banking. But in a survey conducted by the online banking association, member institutions rated security as the most important concern of online banking.

Wang et al. (2003) introduced "perceived credibility" as a new factor that reflected the user's security and privacy concerns in the acceptance of Internet banking, while using TAM as a theoretical framework. The results strongly supported the extended TAM in predicting the intention of users to adopt Internet banking. It also demonstrated the significant effect of computer self-efficacy on behavioral intention through perceived ease of use, perceived usefulness, and perceived credibility.

Kolodinsky et al. (2004) explored factors that affect the adoption or intention to adopt three e-banking technologies and changes in these factors over time. They found that relative advantage; complexity/simplicity, compatibility, observability, risk tolerance, and product involvement were associated with adoption. **Income, assets, education, gender and marital status, and age** also affect adoption. Adoption changed over time, but the impacts of other factors on adoption have not changed.

Gerrard and Cunningham (2003) conducted a study to find out reasons for acceptance of Internet banking services. Exploratory interviews were conducted and the study identified eight

characteristics that influenced the rate of adoption. Two of these characteristics, namely accessibility and confidentiality, were new to the literature. Other characteristics were: convenience, less complex, more compatible, and more suited to those who were computer proficient. Adopters were also found to be more **financially innovative**.

Akinici et al. (2004) developed an understanding of consumers' attitudes and adoption of Internet banking among sophisticated consumers. Based on a random sample of academicians, demographic, attitudinal, and behavioral characteristics of Internet banking (IB) users and non-users were examined. The analyses revealed significant differences between the demographic profiles and attitudes of users and non-users.

Gan et al. (2006) conducted a research to examine consumers' choices between electronic banking and non-electronic banking in New Zealand. The findings showed that the output from the logistic regression indicated that the service quality, perceived risk factors, user input factors, employment, and education were the dominant variables that influence consumers' choice of electronic banking and non-electronic banking channels.

Chung, et. al. (2002) in a survey on Internet banking in New Zealand confirmed the fact that security and complication of Internet banking were some of the factors limiting the full acceptance of Internet banking. Marshall and Heslop (1988) found that consumers' motives for use of technology were useful for predicting subsequent usage. Demographic factors such as higher education levels and employment status were positively related to usage of ATMs, whereas age of the users was negatively related to adoption of ATMs. Filotto et al. (1997) conducted a study among Italian bank customers and distinguished between the characteristics of ATM users and non-users. They found that even though the adoption rate among the **younger users** is more in general the public has been largely reluctant to adopt more innovative service delivery mechanisms offered. A study by Bateson (1983), Darian (1987) and Greco & Fields (1991) tried to identify the profile of the users and the motivating factors that made them prefer these options. Key findings suggested that the motivators were convenience, time saving, increased options and better-perceived control.

Mookerji (1998) explored that Internet banking is fast becoming popular in India. Nevertheless, it is still in its evolutionary stage. They expect that a large sophisticated and highly competitive Internet banking market will develop in future. Mishra (2005) in his paper explained the advantages and the security concerns about Internet banking. According to him, improved customer access, offering of more services, increased customer loyalty, attracting new customers are the primary drivers of Internet banking. But in a survey conducted by the online banking association, member institutions rated security as the most important concern of online banking.

The review of literature also reveals that there are number of factors responsible for adoption of technology. These factors not only include the demographic factors but users' personality related and psycho-graphic factors also. The present study is an attempt to explore the relationship between the Consumer Novelty Seeking (CNS) and their demographics. It further aims to study the relationship between the CNS score and consumer adoption of e-banking technology.

RESEARCH METHODOLOGY

The main objective of the research is to explore the relationship between consumer demographics, their CNS and adoption of e-banking technology. It is also aimed to understand a profile of e-banking users and non-users in India in terms of demographics and their personality related

dimensions (CNS). Both the primary and secondary sources have been used for the collection of data needed to fulfill the research objectives.

An extensive review of literature is conducted from various sources of secondary data listed in the bibliography. Primary data were collected from the respondents through a structured questionnaire designed for the purpose. The respondents were contacted personally and through the e-mail.

For the present study, more than 1600 questionnaires were distributed, out of which about 1,100 filled-in questionnaires were collected back. Based on the scrutiny of the available questionnaires, about 100 questionnaires were removed from final Analysis. Thus, the present study is based on data collected through 1,000 questionnaires that were selected for final Analysis.

The topical scope of the study is limited to consumers' perception of e-banking technology, adoption of e-banking technology and the factors associated with the adoption of e-banking technology.

DATA ANALYSIS AND INTERPRETATION

An attempt has been made to identify the association between "Consumer Novelty Seeking" (CNS) score and several demographic variables. The demographic variables considered for the analysis are: age group, gender, qualification, monthly income, and occupation. An overall CNS score has also been calculated.

A. Comparison between CNS and Age Group

H_0 : There is no association between Consumer Novelty Seeking score and age group of the respondents.

H_1 : There is association between Consumer Novelty Seeking score and age group of the respondents

The detailed cross-tabulation of data is shown in Table-1. The CNS items have been cross-tabulated with age group of the individuals. Here p -value > 0.05 . So, H_0 cannot be rejected at 5% level of significance, which means that there is no association between Consumer Novelty Seeking score and age of the respondents. It means that age does not affect Consumer Novelty Seeking score.

Table-1: Cross-tabulation between CNS Items and Age group

CNS	Frequency	Age Group			Total
		18 to 25 years	26 to 40 years	41 years and more	
Low desire to seek out new product information	Observed	34	26	26	86
	Expected	34.8	28.7	22.4	86.0
Medium desire to seek out new product information	Observed	299	234	185	718
	Expected	290.8	239.8	187.4	718.0
High desire to seek out new product information	Observed	72	74	50	196
	Expected	79.4	65.5	51.2	196.0
Total	Observed	405	334	261	1,000
	Expected	405.0	334.0	261.0	1,000.0

Measurement of Association

Test Statistic	Value	Approx. Sig.
Ordinal by Ordinal - Kendall's tau-c	.007	.778

B. Comparison between CNS and Gender

H0: There is no association between Consumer Novelty Seeking score and gender of the respondents.

H1: There is association between Consumer Novelty Seeking score and gender of the respondents.

Table-2: Cross-tabulation between CNS Items and Gender

CNS	Frequency	Gender		Total
		Male	Female	
Low desire to seek out new product information	Observed	74	12	86
	Expected	69.5	16.5	86.0
Medium desire to seek out new product information	Observed	575	143	718
	Expected	580.1	137.9	718.0
High desire to seek out new product information	Observed	159	37	196
	Expected	158.4	37.6	196.0
Total	Observed	808	192	1,000
	Expected	808.0	192.0	1,000.0

Test statistic	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.777	2	0.411

Here $p\text{-value} > 0.05$. So, H0 can not be rejected at 5% level of significance i.e. There is no association between Consumer Novelty Seeking score and gender of the respondents. It means that gender does not affect Consumer Novelty Seeking score. In other words we can say that there is no negative or positive impact of gender on Consumer Novelty Seeking score.

C. Comparison Between CNS and Qualification

H0: There is no association between Consumer Novelty Seeking score and qualification of the respondents.

H1: There is association between Consumer Novelty Seeking score and qualification of the respondents.

Here $p\text{-value} < 0.05$. So, H0 can be rejected at 5% level of significance i.e. There is association between Consumer Novelty Seeking score and qualification of the respondents. It means that occupation affects Consumer Independent Judgment-Making score. The value of Kendall's tau -c is 0.141 which indicates a weak positive association.

Table-3: Cross-tabulation between CNS and Qualification

CNS	Frequency	Qualification				Total
		Below HSC	Graduate	Post Graduate	Post PG/ Professional	
Low desire to seek out new product information	Observed	34	31	14	7	86
	Expected	25.2	31.6	15.2	14.0	86.0
Medium desire to seek out new product information	Observed	227	268	121	102	718
	Expected	210.4	263.5	127.1	117.0	718.0
High desire to seek out new product information	Observed	32	68	42	54	196
	Expected	57.4	71.9	34.7	31.9	196.0
Total	Observed	293	367	177	163	1,000
	Expected	293.0	367.0	177.0	163.0	1,000.0

Test statistic		Value	Approx. Sig.
Ordinal by Ordinal		Kendall's tau-c	0.000
		0.141	

D. Comparison Between CNS and Monthly Income

H0: There is no association between Consumer Novelty Seeking score and income of the respondents.

H1: There is association between Consumer Novelty Seeking score and income of the respondents.

Here $p\text{-value} > 0.05$. So, H_0 can not be rejected at 5% level of significance i.e. There is no association between Consumer Novelty Seeking score and income of the respondents. It means that income does not affect Consumer Novelty Seeking score. In other words we can say that there is no negative or positive impact of income on Consumer Novelty Seeking score.

Table-4: Cross-tabulation between CNS and Monthly Income

CNS	Frequency	Monthly Income				Total
		less than 10000	10000 to 20000	20000 to 50000	more than 50000	
Low desire to seek out new product information	Observed	20	25	27	14	86
	Expected	24.7	26.1	23.4	11.8	86.0
Medium desire to seek out new product information	Observed	221	231	169	97	718
	Expected	206.1	218.3	195.3	98.4	718.0
High desire to seek out new product information	Observed	46	48	76	26	196
	Expected	56.3	59.6	53.3	26.9	196.0
Total	Observed	287	304	272	137	1,000
	Expected	287.0	304.0	272.0	137.0	1,000.0

Measurement of association

Test Statistic	Value	Approx. Sig.
Ordinal by Ordinal - Kendall's tau-c	0.033	0.164

E. Comparison Between CNS and Occupation

H_0 : There is no association between Consumer Novelty Seeking score and occupation of the respondents.

H_1 : There is association between Consumer Novelty Seeking score and occupation of the respondents.

Table-5: Cross-tabulation between CNS and Occupation

CNS	Frequency	Occupation				Total
		Business	Professional	Govt. Service	Private Service	
Low desire to seek out new product information	Observed	28	12	4	42	86
	Expected	20.6	21.8	11.0	32.5	86.0
Medium desire to seek out new product information	Observed	178	190	85	265	718
	Expected	172.3	182.4	91.9	271.4	718.0
High desire to seek out new product information	Observed	34	52	39	71	196
	Expected	47.0	49.8	25.1	74.1	196.0
Total	Observed	240	254	128	378	1,000
	Expected	240.0	254.0	128.0	378.0	1,000.0

Test statistic	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.027	6	0.000

Measurement of Association

Test statistic		Value	Approx. Sig.
Nominal by Nominal/ordinal	Cramer's V	0.116	0.000

Here $p\text{-value} < 0.05$. So, H_0 can be rejected at 5% level of significance i.e. There is association between Consumer Novelty Seeking score and occupation of the respondents. It means that occupation affects Consumer Novelty Seeking score. The value of Cramer's v is 0.116 which indicates that there is small positive association between occupation and Consumer Novelty Seeking score.

FINDINGS RELATED TO PERSONALITY FACTORS

A structured questionnaire was used as an instrument for data collection. The questionnaire includes dichotomous bi-polar scale, rating scale and Likert scale. There personality-related construct are also used in this questionnaire. The scale used in this study is related to the measurement of "Consumer Novelty Seeking". Item no. 7 is to be reverse scored. It is defined as an individual's desire to seek out new product information. It produces a score in the range of 8 to

56. A score in the range of 40 to 56 indicates a high level of desire to seek out new product information, whereas a score in the range of 8 to 24 indicates a low desire to seek out new product information. The study aims at exploring the relationship between CNS score and consumers' perception / adoption of E-banking technology.

Table-6: Personality Factors table of CNU

Particulars	Factors	CNS	Association
Factors influence use of E-banking services	24*7 OR All time available	0.002	YES
	Convenience	0.000	YES
	Secured transaction	.040	YES
	Direct access	0.021	YES
Problems in using E-banking services	Problem of check in mobile no.	0.028	YES
Frequently of tools/devices for e banking Services	Debit card	0.020	YES
Following transactions you would prefer to do by E-banking	Money Transfer	0.005	YES
	Checking of your current balance	0.000	YES
	Pay Bills	0.008	YES
	Order a Cheque Book	.035	YES
Reasons for not using the E-banking services	No Need(satisfied with traditional banking)	0.044	YES
	No access to Internet/mobile/other	0.042	YES

There is no association between demographic variables viz. age, income, gender and operating variables like Ease of use, Status symbol, ATM as tool, ATM out of order, Amount debited but not withdrawn, password togetherness, miss use of card and card replacement, credit card, mobile, request of demand draft, Create fixed Deposit online, Request stop payment on a Cheque and internet, No need (satisfaction with traditional banking) factors, It is difficult process, Lack of operation knowledge, Lack of operation knowledge, Hidden Costs, different Satisfaction which influence use of e-banking services and Consumer Novelty seeking score.

CONCLUSION

From past few years banks are promoting their E-banking facility for one or the another reason; vis-à-vis to reduce paper work, to reduce difficulty of standing in long queue, for green marketing, to save time, to avail services for 24X7 hours, quick on tip transactions, status quo, secure transaction etc. This particular study has focused on E-banking habits of the people.

In the present study, it has been observed that people prefer more of PSU and Private banks over co-operative & foreign bank about Nine of ten surveyed people are aware of E-banking term and possess the knowledge of at least one E banking service Wondering on result more than half of the surveyed people are aware about secure transaction but only one third people of surveyed use ATM card and very few are in use of phone banking and mobile banking. Reason for this could be high transaction cost and security myth. People who are using E-banking state that influence of friends/relative is more on them were major influence for the usage of E banking services. The people who are not using E banking services state the reasons that they fear from misuse of ATM card, Failure of transaction etc. During study of e-banking services, there are various factors affecting the adoption of e-banking services in India. It was found that there is the reduction in staffing, which can reduce overall costs, even if information technology and online security

systems must be put in place. Also the reduction in buildings infrastructure required to service customers. The potentiality of increasing in revenue through increased all kinds of transactions and customer activity facilitate. The ease with carries out different tasks online without having to visit a bank's premises.

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Co-integration of Indian Stock Market with Emerging Stock Markets

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Abstract

In a country like India where stock market is undergoing significant transformation with liberalization measures, there seems to be linkages of Indian Stock market with other emerging stock markets. The study investigates the integration of Indian stock market returns with emerging stock market returns of Brazil, Russia and China for the time period of seven years from the year 2005 to 2011. Descriptive statistics like mean, median, standard deviation, co-efficient of variation and kurtosis are used to find out the general picture of the returns of each stock market. The study also uses inferential statistics like Pearson's Correlation Coefficient, Granger Causality test and Engle Granger test to find out the relationship and linkages of Indian stock market with emerging stock markets. The result of the study reveals that there is a short run relationship of Indian stock market with emerging stock markets but Indian stock market does not share any long run relationship with the emerging markets.

KEY WORDS – Co-integration, Causality, Linear relationship, Stationary, Emerging Stock Markets.

INTRODUCTION

Cointegration of stock market means interdependence, combination and linkages of global stock market. The global stock markets have become integrated due to globalization, new technological innovation and financial integration (Stiglitz, 2006). The existence of strong economic and trading links, major initiatives in liberalization activities by the governments, advancement in international trade and finance, rapid developments in telecommunication and trading systems and formation of common trading blocs such as NAFTA, European Union and ASEAN have added some more momentum to such integration.

Integrated financial market is assumed to be of immense significance as it is of great importance for promoting domestic savings, investment and economic growth (Mohan, 2004, 2005) and fostering the necessary condition for a country's financial sector to emerge as an international financial center (Reddy, 2003, 2006). The liberalization of financial markets also resulted in regional economic integration, greater co-movement in the stock prices and foreign investments.

The recent global financial crisis has focused more attention on the linkages among the stock markets of Asian countries. India has made tremendous strides in the global economy since opening up of the economy and subsequent economic and political reforms. The outcome being integration of various segments of capital market, strengthening competition, financial deepening with innovative instruments, easing of restrictions of foreign capital flows, lowering transaction costs and enhancing liquidity.

In a country like India where the stock market is undergoing significant transformation with liberalization measures, and the analysis of the nature of integration with other developed and emerging markets would not only give an idea of the possible gains to be reaped out of portfolio diversification from Indian market, but may also provide some indication of the vulnerability of the country's stock market in case of a regional financial crisis and consequent reversal of capital flows from the region. The globalization of financial systems and the acceleration of information transmission have increased the risk of financial crises, as a crisis in one country can spread to other countries and bring about worldwide crises.

REVIEW OF LITERATURE

According to Markowitz (1952), investors can improve the performance of their portfolios by allocating their investments into different classes of financial securities and industrial sectors that would not move together in the event of valuable new information. Numerous studies beginning with Taylor and Tonks (1989), Chowdhry (1997) and Masih and Masih (2001) are among other researchers who have utilized Granger (1969) and Johansen Juselius (1990) techniques to assess international stock market cointegration in their studies. Noted that, majority of the studies focuses on the developed equity markets until recently, the equity markets of emerging economies has arouse remarkable interest among researchers. Examples of these studies are Ibrahim (2005), Yusof and Majid (2006), Majid et. al (2008) and Majid and Kassim (2009). They documented that United State (US) market is the most influential market in leading other equity markets.

Bhar and Nikolova (2009) who explored the level of cointegration of the BRIC with their respective regions and the world in the post-liberalization period has found that India has the highest level of integration on a regional and world level amongst the BRIC countries followed by Brazil, Russia and lastly China. The study also suggested the existence of diversification opportunities for China, given its closed nature of the financial system.

Another study on co-movement among selected stock market conducted by Modi et. al (2010) found that the correlation of BSE (India) with BVSP (Brazil), MXX (Mexico), FTSE100 (UK), DJIA and NASDAQ (US) is low. Therefore, these combinations provide attractive portfolio diversification opportunities for Indian investors. Besides, the author also conducted Granger causality test which revealed that MXX, Dowjones and Nasdaq are least dependent on other markets, whereas Dowjones is the most influential market for the period July 1, 1997 to June 30, 2008 of study. Aloui et. al (2011) who also evaluate on the co-movements between the BRIC markets and the US during the period of the global financial crisis indicate that dependency on the US is higher and more persistent to Brazil-Russia than for China-India. In their study, the author paired Brazil and Russia - countries which are highly dependent on commodity prices and China-India whose economic growth is largely influenced by finished-products export-price level.

Using weekly and monthly index returns of the US and BRIC stock markets, Lian and Brown (2010) conducted the study simply using unit root and cointegration test for the period of study; October 13 1995 to October 13 2009. Their findings indicate that there is no evidence of cointegration on pair markets US-Brazil, US-Russia and US-India. However, there is some

cointegration between US-China market pair and some cointegration between the US and the BRIC indexes altogether.

Chittedi (2009) who utilized the Granger causality, Johansen co integration test and Error Correction Modelling (ECM) in the study has found the co integration relationship between BRIC countries and developed countries namely US, UK and Japan. The author also indicates that US and China leads other markets during the period of study, 1998-2008. India to a great extent is far less integrated with the global markets and is fortunate in its leadership at the policy level.

Following Chittedi (2009), the present study examines the cointegration of Indian stock market with the emerging stock markets of Brazil, Russia and China. It also examines if there is significant difference between the returns of all the selected four stock markets of India, Brazil, Russia and China during the study period.

RESEARCH METHODOLOGY

The main objective of present study is to examine the cointegration of Indian stock market with emerging stock markets and to study the linear relationship between the above said stock markets.

The present study is Descriptive Research because in this study cointegration of the Indian Stock Market with the emerging stock markets is examined using the daily stock index returns from the year 2005 to 2011. The existence of relationship among the stock markets is studied but what are the reasons behind this relationship is not studied. The daily closing data for seven indices were collected for seven years from the year 2005 to 2011 from yahooofinance.com and returns were calculated using the formula as mentioned below. Some observations were deleted because of different holidays and after matching the daily closing index returns of all the selected stock markets there were 1383 observations. The indices of four countries are considered for the present study that comprises Sensex of India, Bovespa of Brazil, RTS of Russia and SSE Composite from China.

$$\text{Returns} = \frac{p_t - p_{t-1}}{p_{t-1}} \times 100$$

p_t = Daily closing data of index at time t

p_{t-1} = Daily closing data of index at time t-1

To study the linear relationship between the Indian Stock Market with the emerging stock markets Karl Person Correlation test is applied. The correlation was calculated pair-wise for each stock market index return under study with Indian stock market index return. To examine the cointegration of the Indian Stock Market with the emerging stock markets Granger Causality test and Engle Granger Cointegration test is used. This test can be conducted only if the data series is stationary. So to check the stationary of data series Augmented Dickey Fuller test and Philip Pheron test is carried out for all the data series of four stock market index returns.

Karl Pearson Correlation

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related and it computes measures of similarity and distance. It is a technique for investigating the relationship between two quantitative, continuous variables. The first step in studying the relationship between two continuous variables is to draw a scatter plot of the variables to check

for linearity. The correlation coefficient should not be calculated if the relationship is not linear. In present study the relationship between the variables is linear. According to Karl Pearson 1896 the Pearson correlation above 0.75 indicates a Strong relationship and that below 0.50 is adopted as a Weak relationship. The Pearson coefficient between 0.50 and 0.75 is considered as a Moderate relationship. The null hypothesis and alternative hypothesis for correlation is as under:

H_0 : There is no significant linear correlation between Indian stock markets and Emerging stock markets from 2005 to 2011.

H_1 : There is significant linear correlation between Indian stock markets and Emerging stock markets from 2005 to 2011.

Unit Root Test or Stationary Test

A test of stationarity (or non stationarity) that has become widely popular over the past several years is the unit root test. It will first be explained, and then illustrated and then some limitations of this test will be considered.

The starting point is the unit root (stochastic) process, it starts with

$$Y_t = \rho Y_{t-1} + u_t \quad -1 \leq \rho \leq 1$$

Where, u_t is a white noise error term.

It is known that if $\rho = 1$, that is, in the case of the unit root, becomes a random walk model without drift, which we know is a nonstationary stochastic process. This is the general idea behind the unit root test of stationarity.

Augmented Dickey Fuller Test

In conducting the DF test, it was assumed that the error term u_t was uncorrelated. But in case the u_t are correlated, Dickey and Fuller have developed a test, known as the **augmented Dickey-Fuller (ADF) test**. This test is conducted by "augmenting" the preceding equation by adding the lagged values of the dependent variable ΔY_t . The ADF test here consists of estimating the following regression:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum \alpha_i \Delta Y_{t-i} + \varepsilon_t$$

Where, ε_t is a pure white noise error term and

$$\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2}),$$

$$\Delta Y_{t-2} = (Y_{t-2} - Y_{t-3}), \text{ etc.}$$

The number of lagged difference terms to include is often determined empirically, the idea being to include enough terms so that the error term is serially uncorrelated. In ADF it will still be tested whether $\delta = 0$ and the ADF test follows the same asymptotic distribution as the DF statistic so the same critical values can be used.

Phillips Perron Test

When the data is not normally distributed PP Unit Root Test gives a better and accurate result compared to ADF test. Therefore present study also undertakes PP test to check the stationarity

the data as the data is not normally distributed. An important assumption of the DF test is that the error terms u_t are independently and identically distributed. The ADF test adjusts the DF test to take care of possible serial correlation in the error terms by adding the lagged difference terms of the regressand. Phillips and Perron use *nonparametric statistical methods* to take care of the serial correlation in the error terms without adding lagged difference terms. Since the asymptotic distribution of the PP test is the same as the ADF test statistic.

Granger causality test

The existence of a relationship between variables does not prove causality or the direction of influence. But in regressions involving time series data, the situation may be somewhat different because, as one author puts it time does not run backward. That is, if event A happens before event B , then it is *possible* that A is causing B . However, it is not *possible* that B is causing A . In other words, events in the past can cause events to happen today. This is roughly the idea behind the so-called Granger causality test. But it should be noted clearly that the question of causality is deeply philosophical with all kinds of controversies. The econometrician Edward Leamer prefers the term **precedence** over causality. Francis Diebold prefers the term **predictive causality**.

There are several things that need to be noted before conducting Granger causality test:

1. It is assumed that the two variables are *stationary*.
2. The number of lagged terms to be introduced in the causality tests is an important practical question. As in the case of the distributed lag models, the *Akaike or Schwarz information criterion* may be used to make the choice. But it should be added that the *direction of causality may depend critically on the number of lagged terms included*.
3. It is assumed that the error terms entering the causality test are uncorrelated.
4. Since the present study is interested in testing for causality, one need not present the estimated coefficients of models.

The Granger (1969) approach to the question of whether X causes Y is to see how much of the current Y can be explained by past values of Y and then to see whether adding lagged values of X can improve the explanation. Y is said to be Granger caused by X if X helps in the prediction of Y , or equivalently if the coefficients on the lagged X 's are statistically significant. Note that two way causation is frequently the case, X granger causes Y and Y granger causes X . It is important to note that the statement " X granger causes Y " does not imply that Y is the effect or the result of X . Granger causality measures precedence and information content but does not by itself indicate causality in the more common use of the term.

Engle granger test

Two non stationary series are cointegrated if they tend to move together through time. In time series, each series is said to be integrated of order 1" or $I(1)$. If the two non-stationary series move together through time then it is said that they are cointegrated." Economic theory would suggest that they should be tied together via arbitrage, but that is no guarantee. In this context, testing for Cointegration amounts to a test of the substitutability of these assets.

The basic test is very simple. Regress one $I(1)$ variable on another using least squares. If the series are cointegrated, the residuals from this regression will be stationary. This is verified using Augmented Dickey-Fuller test (ADF). The null hypothesis is that the residuals are non stationary,

which implies that the series are not cointegrated. Rejection of this leads to the conclusion that the series are cointegrated. The cointegration function in Gretl carries out each of the three steps in this test. First, it carries out a Dickey-Fuller test of the null hypothesis that each of the variables listed has a unit root. Then it estimates the cointegrating regression using least squares. Finally, it runs a Dickey Fuller test on the residuals from the cointegrating regression. This procedure, referred to as the Engle-Granger Cointegration test.

RESULTS

From the descriptive statistics as shown in Table-1 it can be interpreted that during the whole study period from 2005 to 2011 an investor can gain higher from emerging markets especially India and Russia. India gives highest average returns to an investor but if the investor is ready to undertake risk then he can get highest returns from Russia. Amongst all the emerging markets Russia is more risky followed by Brazil, China and India.

Table-1 Descriptive Statistics from 2005 to 2011 (1383 observations)

Variable	Mean	Median	Minimum	Maximum	Std. Dev.	C.V.	Kurtosis
India	0.07248	0.09916	-10.9564	17.3393	1.76339	24.3276	9.0141
Brazil	0.04000	0.01673	-11.3931	13.4262	1.87884	46.9634	5.0214
Russia	0.02534	0.13759	-19.1031	22.3896	2.45172	96.7240	11.220
China	0.04011	0.07060	-8.84069	9.45491	1.85279	46.1867	3.2261

Russia along with high risk it also gives maximum returns on a particular day at 22.38%. The Indian market is highly volatile and it gives maximum average returns compared to all other countries. Kurtosis indicates a height or peakedness of the returns. Higher kurtosis means that the difference between the lowest and the highest returns earned on a particular day is very high and vice versa. Table-1 shows higher kurtosis in Russian market because the difference in the minimum and maximum returns is highest in Russia.

Table-2 Correlation of India with other emerging countries from 2005 to 2011

Variables	Correlation	Significance	Strength
India-Brazil	0.279	0.000	Weak
India-Russia	0.428	0.000	Weak
India -China	0.235	0.000	Weak

VAR System, maximum lag order 23

Table- 2 depicts that the correlation between Indian stock market and emerging stock markets is weak. Lower the correlation better it is for the investors to take advantage of portfolio diversification (Spiedell & Sappenfield 1992). The correlation between India-China (0.235) is least. This indicates that investors of China can earn more returns by investing in India and vice versa. The correlation between India-Russia is highest at 0.428. This implies that investors in Russia cannot reap as much benefit from India as investors of China.

The stationary test reveals that for the rate of return of India, Brazil, Russia and China at (Level) it can be seen that ADF test statistics is statistically significant. In this case alone intercept is not

statistically significant. In case of both intercept and trend co-efficient together are statistically not significant. For none, Akaike Information Criterion & Schwarz Criterion are minimized at a time and series is considered as stationary. There is no need to go for $I(1)$ & $I(2)$ as series is stationary at $I(0)$. So for the whole study period from 2005 to 2011 the time series data of returns of all the stock market under consideration is stationary at level $I(0)$. The result of Philips-Perron test is similar to ADF test.

The Granger Causality test is conducted to find out as to which stock market influences the returns of the other considered stock markets during the whole study period from 2005 to 2011 with 1383 observations.

Table-3 Granger Causality Test

Null Hypothesis	Obs	Lag	F Statistics	P value	Inference
Ret_Brazil does not Granger Cause Ret_India	1372	11	8.78826	0.00000	Reject
Ret_India does not Granger Cause Ret_Brazil	1372	11	2.65274	0.00230	Reject
Ret_Russia does not Granger Cause Ret_India	1368	15	2.39342	0.00202	Reject
Ret_India does not Granger Cause Ret_Russia	1368	15	2.08848	0.00848	Reject
Ret_China does not Granger Cause Ret_India	1378	5	3.18367	0.0073	Reject
Ret_India does not Granger Cause Ret_China	1378	5	1.6121	0.15374	Accept

The test is conducted pair wise for the returns of all considered stock market with India and of India with other considered stock market. The null hypothesis of all the pairs is as shown in the Table-3. In whole study period the optimal lag length found out by the Vector Auto Regression (VAR) lag order selection method is 23 for all considered stock market. On the basis of this the results of test are shown for each pair in the Table-3. The result shows that India influences Brazil and Russia and India is being influenced by Brazil, Russia and China. Therefore from result of granger causality it is clear that there is short run cointegration of Indian stock market with emerging stock markets of Brazil, Russia and China during the study period.

The Engle Granger test is conducted to find out if there is cointegration between the returns of Indian stock market and emerging stock markets. The basic requirement of the cointegration test is that each time series variable should be stationary at first level difference or order 1 denoted as $I(1)$. But the data series in the present study are stationary at level 0 denoted as $I(0)$. So the Engle Granger cointegration test could not be conducted because variables of same order and at order 1 can only cointegrate each other. Thus in present study the time series data of each stock market return cannot cointegrate each other. Hence there is no cointegration of Indian stock market returns with the emerging stock market returns.

CONCLUSION

The main objective of the study is to examine the linear relationship and cointegration of Indian stock market with emerging stock markets of Brazil, Russia and China. The results reveal that there exists very weak correlation between India and emerging countries. Weak correlation indicates that investors can take advantage of portfolio diversification by investing in either of the markets and earn returns. The result of Granger Causality test shows that there is bidirectional granger causality between India-Brazil and India-Russia. There is unidirectional granger causality between India-China. Thus there is short run relationship between Indian stock market and emerging stock markets. The Engle Granger cointegration test result reveals that there is no cointegration between Indian Stock Market and emerging stock markets which indicates that there is no dependence of either stock markets on each other.

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Radio Listenership in India- Trends and Views of Experts

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Abstract

Radio as a broadcast medium has come a long way since 1906 when Reginald Fessenden used a synchronous rotary-spark transmitter for the first radio program broadcast, from Brant Rock, Massachusetts. Today radio is seen to be an anywhere, and every where medium. In India, the liberalisation of radio broadcast has resulted in most of the media houses diversifying to offer radio services. This medium faces the challenge of a measurement technique for listenership. Radio operators make lot of innovative efforts to attract both listenership and pull for advertisement budget to this media. Radio jockey is looked upon as a major promoter in attracting radio listeners to the station. The medium is becoming an essential element in the media mix and a constant source of youth connects. The paper is an attempt to study the trends in radio advertising and to find out the views of radio station heads with regards to radio as a medium for advertising.

Key words: Radio as an advertising medium, radio listenership, effectiveness of radio as a medium for advertising

RADIO AS A MEDIUM: THE BACKGROUND

The history of radio broadcasting is a captivating passage from very humble start to its digital, on-line, global reach today. In 1906, Reginald Fessenden used a synchronous rotary-spark transmitter for the first radio program broadcast, from Brant Rock, Massachusetts. The first regular entertainment broadcasts commenced in 1922 from the Marconi Research center at Writtle, near Chelmsford, England (<http://en.wikipedia.org>). The affordability, accessibility, mobility, reach and scope were the factors that led to the radio revolution. During its peak growth period and before the advent of television, radio was the fastest mode of communication. It was a simple gadget which could be used easily by all, leading to its popularity even amongst the rural masses (http://en.wikipedia.org/wiki/history_of_radio).

The AM broadcast radio was one of the earlier broadcasting systems. It aired music and voice in the medium frequency (0.300MHz to 3MHz) radio spectrum. AM radio used amplitude modulation; where in the amplitude of the transmitted signal was made proportional to the sound amplitude captured by the microphone whereas the frequency remained unchanged. However the transmission quality was hampered by static interferences, as lightning and other sources of radio that are transmitted at the same frequency (<http://en.wikipedia.org/wiki/radio>).

Losing Ground

With the advent of more advanced electronic media, radio suffered a major setback. Television was the first medium to introduce to the world the magic of visual media. TV brought the world directly into the drawing rooms of people and it soon ate into radio's share even though it was a more expensive medium. Radio was written off as a medium that had lived its life. Later more interactive media like the internet; cable etc, further compounded its problems (Jha,2008).

During the 1960s-1970s, radio tried hard to reinvent itself; there were a lot of attractive jingles and promotions. Programming, music and contests were now targeted at specific age groups (mostly 15-35) based on demographic research showing this group has spending power (<http://www.californiahistoricalradio.com/100years.html>). Deregulation in most part of the world in mid seventies helped its cause to some extent. In 1933, FM radio was patented by inventor Edwin H Armstrong. FM used frequency modulation of the radio wave to minimize static and interference from electrical equipment and the atmosphere, in the audio program. This radio sends music and voice with a higher fidelity than AM radio. The FM radio wave popularized the cult on the radio to a very large extent. Nevertheless, radio was still struggling despite the swelling of the number radio stations worldwide during the 1980s-1990s (<http://www.californiahistoricalradio.com/100years.html>).

The Revival

With the advent of digital technology in radio industry the tide turned in favour of radio broadcasting. With use of this technology radio broadcasts could now be stored, edited and broadcast with the help of the hard drive of a computer. Audio programming that entailed splicing tapes could now be done at the click of a mouse. Analogue devices like cart machines completely disappeared by 2004, and were replaced by computer memory. Radio which was written off, for a long time, by many people, today has reincarnated as - FM, internet radio, satellite radio and community radio. It is a love story rediscovered again (<http://www.californiahistoricalradio.com/100years.html>).

With improved sound quality and variety of programming, the popularity of radio is once again increasing, leading to what is called as the 'second coming' or the resurrection of the radio. Radio's integration with other medium has made it the most rapidly evolving medium today. There are many reasons that can be attached for radio becoming a unique medium. It can be heard just about anywhere, while walking, jogging, driving or carrying out other chores.

During the past few years, the industry has earned significant profits in USA and Canada. From 2002 to 2006, the industry earned a profit of 18.8 cents before interest and taxes for each dollar of revenue, not since the beginning of the 1970s has there been a five-year period when the industry's profit margin exceeded 15% (<http://www.statcan.ca/english/freepub/56-208-xie/1007000/part1.htm>).

THE OBJECTIVES OF THE STUDY AND RESEARCH PLAN

1. To study the radio listenership trends in India
2. To find out the views of radio station heads related to radio as a medium for advertising

Research Plan

A qualitative approach has been adopted for the study. For the qualitative approach exploratory research design was employed. Data was collected from secondary sources in the form of publications of different advertising agencies, journals, E journals, and reports from media analysing agencies.

Four F.M. radio stations are operational in Surat, these are Radio Mirchi, Big FM, My FM, and Radio city. The experts for the study were the Radio station heads. An attempt was made to take responses from the officials of all the four radio stations. In spite of repeated efforts we could get responses from three FM radio station heads other than My FM. In depth interviews were taken of three radio station heads. A check list of questions to be asked was prepared and administered. Discussions with heads of different radio stations also provided important inputs on perceptions of advertisers and ways employed by radio operators to improve listenership. Questions were also raised on methods radio station heads employ on measuring listenership patterns.

Research Approach	Research Design	Research Method
Qualitative	Exploratory	In depth interviews (radio station heads)

JOURNEY OF RADIO IN INDIA

The first radio program in India was broadcast by the Radio club of Bombay in June 1923. Later broadcasting by private Radio clubs started in a few more cities of India like Kolkatta and Chennai. July 1927 witnessed the setting up of a regular broadcasting service on experimental basis at Mumbai and Kolkatta by the Indian broadcasting company. Indian State Broadcasting Service under the controller of Broadcasts was constituted in 1935. It was renamed as All India Radio (AIR) in January 1936. At the time of partition India had just six stations in Delhi, Mumbai, Kolkatta, Chennai, Tiruchirapalli and Lucknow while three radio stations went to Pakistan, which were Lahore, Peshawar and Dacca, now in Bangladesh. (Singh and Bhatnagar, 2007). Soon these stations became the life line of the country. From 1957, the radio service was popularly known as 'Akashvani' Vividh Bharti. Commercial broadcasting was first started in Indian radio in 1967. AIR started broadcasting sponsored programs in the mid-1970s. Commercials on radio started in early 1980s on Vividh Bharti and were started in other channels by the mid-1980s. Since 1980s, following the deregulation, radio witnessed a turnaround. AIR by November 2007 had 223 stations and its coverage was 91.42% (Singh and Bhatnagar, 2007).

FM radio the new advertising medium

RADIO, 'A medium of unparalleled immediacy, intimacy and power!' "I see shakti in it, the power of God!!" Mahatma Gandhi 12 November 1947. Currently as far as advertising is concerned, only one and a half percentage of the total advertising spending can be attributed to radio. In other countries around the world, the average ranges from 5-15%. In Sri Lanka, for example, 21% of the total expenditure is spent on radio (V Ravikumar and Annamalai, 2003).

As a medium it offers a great opportunity for the advertisers to advertise their products and services. The FM broadcasts have already been popularized in the urban and the rural markets. The evidence is, today, we keep hearing the broadcasts in buses, tea shops, and residences. One can have an access to radio while walking or going on two wheelers, on mobile, with the advent

of FM transmissions. It covers the complete segment of the consumers, be it rich or the poor, the young or the middle aged, the urban or the rural. This kind of total demographical reach could lead to a positive promotion strategy.

When we think of radio advertising there are various components in it like:

1. Jingle
2. Theme conceptualization.
3. Mnemonics
4. Voice casting
5. Recording
6. Sound effects
7. Editing

RADIO AS A MEDIUM FOR ADVERTISING: A REVIEW

Radio messages are to be used as a lead generation mechanism (Rowse and Fish, 2005). The fact that music is well- received by the audience makes it inevitable to include a short jingle as a part of radio advertisement. Radio is often called “the theatre of the mind” hence in a radio jingle that runs for 20 to 30 seconds it is important for the advertisers that the listener’s imagination becomes part of the creative piece of music.

As mentioned by Edward Rowse and Louis Fish , 2005 in their book Fundamentals of Advertising, “Radio advertising does not take place of other advertising mediums. Each medium has its proper place and function. Newspapers and, magazines appeal to the eye; the radio appeals to the ear; demonstration and sampling appeal to a definite combination of senses.”

As radio advertising confines itself strictly to an appeal to the ear of the public, it may be used to produce a completely favourable reaction toward the product being advertised. The primary function of this type of advertising perhaps is to familiarize the audience with the names of the product and the manufacturer, to describe the uses of the product and, in general, to create good will. The radio is often used also to call attention to other advertising media employed by a business and in this way to enhance the effectiveness of those media. The radio advertising serves also to keep the business and its policies continuously before listeners. Radio advertising may be used not only for national campaigns but also for local campaigns. As certain stations are purely local, they afford what is called spot advertising. Retail stores often use spot broadcasting, in conjunction with a newspaper campaign, to announce a sale. If the merchandise has a universal appeal, and purchases are made with high frequency, the chances are there that the same may result in higher attention (http://www.aef.com/pdf/advertised_mind_16.pdf).

Abernethy et.al (1997) give certain tips for getting better results from radio advertising. They say that one needs to invest both in producing the advertisement and also in buying the airtime. To get the best result one needs to take the help of a professional copywriter rather than depending on the radio station. The copy should be crisp and clear rather than being funny .One should give contact details and offer a prize or a competition to give the listeners an incentive to act immediately, this helps in getting the response. The ads should not be overloaded with the information according to them, but trying to stuff the answer to every possible consumer question into 30 seconds of radio airtime is a recipe for chaos. The radio ads can be linked to another activity like direct mail, leaflet drops or press advertising all complementing the radio by widening the opportunity for consumers to respond. They add that trying to match the airtime one buys to when the customers

will listen pays. The pattern of listening varies enormously across the day with a different profile for drive time, afternoon and late night listeners.

Onkvisit and Shaw (1985) have listed out the various Asian media and their characteristics, listing out their advantages and limitations. According to them the major advantages of radio are that this is a medium that listeners from all social strata patronize and views it to be up to date. According to them the listener's loyalty depends on the Radio Jockey. The limitations as seen by them for this medium are changes in programme format, clutter and availability problem.

RADIO TRENDS IN INDIA

The Madison India Radio Research reveals that consolidation and specialization are two distinct trends in the evolution of the radio business. Their in-depth survey focuses on International trends in the radio business, radio measurement and the best practices that have evolved in using the medium (<http://www.exchange4media.com/e4m/radio/RadioTrendsInIndia.asp>).

It is ironical that while India has the second highest penetration of cable and satellite homes in the world, radio has suffered from shunted growth. This can be attributed perhaps according to some to the misdirected policies by government, which did not give enough prominence to radio as a rich medium for entertainment and also for community development. Recently though, the government has liberalized radio broadcast and this has resulted in most media houses diversifying to offer radio services.

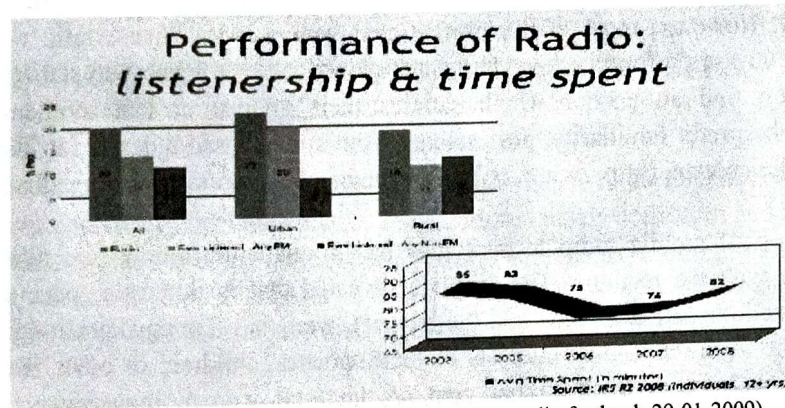
Madison research says, in Mumbai, for instance, eight private FM radio stations have been launched. Mumbai listeners can tune in to any of the ten FM stations (eight from private broadcasters and two from AIR). The government had indicated that its long-term plan is to have 150 FM stations across 40 cities. Currently there are close to 300 stations in 65 cities. Is this a case of one too many? Can Indian market sustain so many radio stations? Going by the International benchmark, even 300 stations across India is a sustainable proposition. There are more than 6000 radio stations in US and even a developing country like Nigeria has 18 FM stations. In most markets, radio manages to garner around 4-5% of the mass media spend. In some countries like Sri Lanka, radio accounts for 20% of ad spend. In 2001, American radio commanded US\$3.2 billion out of US\$60 billion spent on mass media. In India, currently radio is able to garner less than 1% of the total ad pie of Rs.8, 600 crore in the early years. Madison media had estimated that by 2004, advertisers will spend around Rs. 500 crore on radio. This will constitute around 4 % of the enlarged ad pie (<http://www.exchange4media.com/e4m/radio/RadioTrendsInIndia.asp>).

International experiences show two distinct trends in the evolution of the radio business. Typically, there is a surge of activity when the media is liberalized but over a horizon of five to six years, consolidation is inevitable and stations groups are formed that control most of the revenues. For instance, in UK four media groups control nearly 60% of ad revenue. We expect similar consolidation exercise in India. Radio stations that are part of established media houses would do well. Publications having strong city edition will have an advantage as they already have infrastructure to marshal local advertisers and also keep a tab on the pulse of the city citizens (<http://www.exchange4media.com/e4m/radio/RadioTrendsInIndia.asp>).

Internationally, radio stations have grown by attracting niche audiences (like a Hispanic channel in US or a Malayalam channel in the Gulf) and local advertisers. As of today, if one goes by

Mumbai experience, the concept of niche programming has not yet caught the imagination of the broadcaster and audiences find it almost impossible to distinguish one from another. Madison Media expects that the evolutionary pressures will prevail in India and radio stations will increasingly find their own niche. For instance, we expect that in future, emergence of stations that address only specialist audience groups - like a special radio station dedicated to south Indians residing in Mumbai or a station that caters exclusively to college going population. Such specialist channels will be an ideal medium for advertisers, as they will have access to well defined captive audience (<http://www.exchange4media.com/e4m/radio/RadioTrendsInIndia.asp>).

Following figure shows how radio has performed in terms of listenership and time spent over period 2003-2008 in India.



(<http://www.slideshare.net/slashvelandy/the-mudra-media-factbook-29-01-2009>)

Statistics below show that radio is being preferred as a medium of advertising. Players from all major product categories have invested a few crores on radio advertising in the year 2008 in India.

leading investors on radio: by advertiser & product category

Advertisers	Spends Rs. Cr.	Product Category	Spends Rs. Cr.
Star Network	14	Tv Channel Promotions	58
Reliance Communications	12	Cellular Phone Service	45
Tata Teleservices	12	Independent Retailers	39
Hindustan Lever	11	Properties/real estates	34
Pantaloon Retail	9	Social Advertisements	27
7ee Network	9	Publications/Books	20
Sony Network	8	Cars/Jeeps	16
Munshi Udyog	7	Insurance Life	14
NDTV Network	6	Jewellery	13
Bharti Airtel	6	Internet service-general	13

Source: Radio India & Radio India Advertisers

(<http://www.slideshare.net/slashvelandy/the-mudra-media-factbook-29-01-2009>)

Radio and Women

An in-house research initiative under taken by meow research (an on-going initiative of the India Today Group) revealed that radio is not just a neutral technology in the lives of women. The consumption patterns reveal that radio plays a significant role strongly embedded in the social, cultural, economic, political, and moral cultures of these contexts. The manner in which

homemakers and professional women associate with and consume radio as a technology and a medium are distinct, bringing to forefront the contexts, constraints, and circumstances they operate in (<http://www.exchange4media.com/e4m/radio/Engagedlistening.asp>)

For homemakers, radio is a constant companion which allows them to pay heed to the domestic chores. As compared to professional women, homemakers, though not as discerning an audience, are very loyal listeners. The homemakers' consumption of radio follows a distinct pattern through the day based on preference of specific shows, stations, and hosts during those hours. Until and unless the routine is interrupted by unprecedented incidents, homemakers diligently follow the routine. The pattern of radio consumption amongst professional women is determined by the demands of their jobs. Most working women listen to the radio on their mobile phone when they are driving to or back from work. For those professionals who have a pre-determined routine, a tendency to follow identified 'favourite' shows akin to the loyal listenership of homemakers has been identified. However, most of the professional women who have erratic work schedules emerge as the 'voyeurs' of radioscape. They unapologetically shift between stations, shows, and hosts until they find an anchor which satiates their interest at that moment. Unlike the homemakers who prefer familiarity, professional women expressed a desire for instant titillation through the radio content. (<http://www.exchange4media.com/e4m/radio/Engagedlistening.asp>)

The proliferation of mobile radio technologies has dramatically altered the manner in which women engage with the medium. The research revealed that in domestic space vis-à-vis other technologies/ medium like television and the Internet, women – homemakers and professionals – have to concede to the demands/ interests of their spouses, children, or other family members. Amongst homemakers, at least 70 per cent of the total women interviewed during **Meow Research (an initiative of Radio Today, a India Today Group company)** mentioned that during Sundays and holidays, it is their husbands, children, or the increased burden of household chores that influences their listening pattern, more often than not, disrupting it.

In comparison, working women exhibit a stronger influencing power over the aforementioned technologies within domestic space. However, experiences of women across these two groups in domestic spaces reveal that the influence exercised by them over technologies dramatically decrease with the presence of their spouses, children, or other family members. Radio, in this context, emerged as a technology and medium, which not only allows them to exercise their own choice but engage with it, uninterrupted, irrespective of the presence of other family members. At least 85 per cent of the women across the three cities stated that they tuned in to the radio when other family members were present on their mobiles or portable sets. For most women, one of the most important anchors to engage with a station and a show is the radio jockey or radio host, unlike film and television stars, who though desired are inaccessible, RJs have a humane, accessible persona. The opportunities available to interact with the hosts contribute to deconstructing the larger-than-life personas of the jockeys/hosts, allowing the listeners to articulate with the hosts as an important member of their everyday lives. (<http://www.exchange4media.com/e4m/radio/Engagedlistening.asp>)

ADVERTISER'S PSYCHOLOGY

We tried to gauge the psychology of the advertisers through the in depth interviews of the radio station heads. The mindset of business people in Surat and their educational level affect their perception about radio advertising. The responses pointed out that in Surat the advertisers view advertising as a cost rather than an investment and it takes a lot of effort to get advertisements

form local clients. Majority of the ad campaigns are national campaigns carried out by brands as an extension of their main campaign. In Surat, the business entrepreneurs are running their family owned business and the education level is low which also proved to be a hindrance in accepting radio as a medium for advertising.

Retailers and real estate/builders are the major radio advertisers in Surat. The major purpose of advertising is creating awareness and giving a boost to their sales. Local advertisers look upon radio as a medium to go in for retail advertising that can generate instant sales rather than a brand building activity. Major advertising campaigns are released during festive season and specific months when the clearance sales are on. An important set of clients that these radio stations have are the real estate/ builders who advertise their new projects on radio. Currently it is estimated that about 1/3rd of the revenues are from this category of clients for radio operators in Surat.

EFFORTS OF RADIO STATIONS TO ATTRACT ADVERTISERS

According to the responses received from the radio station heads radio operators have come up with two new concepts to attract clients toward the medium, namely activation and amplification. Information technology also is being harnessed. The radio stations have web portals and the RJ's have a presence on social media. This is to increase listenership and attract advertisers. The efforts made by the radio stations are described below:

***Activation :** Activation refers to generating consumer interest by allowing consumers to use a product or experience a service. In this way, the brand's value is "activated," or realized by the consumer, who then connects the value given with the brand and walks away with a strong impression. In case of advertising it is a process of promoting the main communication idea or the message through a more active process by one to one interaction with the consumers. It can be done through participating in an event or any other on ground activity. Activation's core strength lies in being one-to-one, while advertising is one-to-many. Activation is all about experiential marketing.

Whatever message is conveyed in the advertisement can be delivered to the consumer, explaining the unique selling proposition (USP) and experience of the product, which provides a better knowledge and enables him to choose a product over the competition, fulfilling the role of activation. In an effort to tap the growing market for non-traditional communication, advertising and media agencies have started floating specialist outfits. Such non-traditional communication could include on-ground activities as well as online ones; the agencies club such services together under the head activation. Activation includes events, promotions, retail display, outdoor, digital, CRM (customer relationship management), direct and other such services. In India however the word is more commonly used for on ground activity.

The radio operator combines an on ground activity with promotions on radio. This activity is carried out to give visibility to client's advertisement, which in case of radio is missing. Here the radio partners with different sponsors on ground events like music shows, kitty parties etc. Clients are offered a tied offer of sponsorship/ co sponsorship for the shows and advertisement secondages on radio.

***Amplification:** This activity is carried out only for a single client. Radio mirchi had carried out such activity with "Hutch", when it changed the colour to pink. The activity involved the RJ to

say “radio mirchi, it’s pink” instead of the regular caption of “radio mirchi, it’s hot”. The programmes run on radio highlighted the word ‘pink’ time and again to create the desired amplification. Thus here the activity is carried out for a single client highlighting it throughout the day.

*** Song Selection and relationship marketing:** As there is not much data available on listenership the radio operators rely more on relationship marketing rather than statistical marketing. For a city like Surat the only source for listenership rating is IRS report. This report has only one question incorporated, “which is the radio channel that you have tuned to in last week”. Even the sample size selected is too small.

To achieve higher listenership the operators go in for serious research on song selections. One of the Radio Mirchi has gone in with a tie-up with “planet M” a retail outlet for music needs. They collect the data of CD sold in last ten days and go in for song selection accordingly. They also conduct a sample survey by playing song clips of new songs released in a particular week. Radio city follows a policy to play songs which are rated between 2.5 and 3 on tempo. Tempo numbers are arrived based on how fast the song is, faster the song higher the rating. The stations also have specific slots for RJs and normally it is a 4 hour slots and the time slot to air your product is important. Radio can be broadly divided into a) morning, b) mid-day, c) evening and d) late night. The song selection is also done keeping in mind the above time slots. Mainly during mid-day it is retro songs or songs that are played or songs with lower tempo as mid-day listeners are mostly busy in their jobs but like to listen to classical music. Similarly late night again is the time when the songs played are mainly from old eras.

***Other Efforts:** Radio stations conduct on air contests and distribute free passes for various on ground activities, which are sponsored by its clients. Radio stations have come up with their own web portals where they have different types of feeds to lure visitors to their radio station. RJ’s have their own pages on social networking sites to have their own fan following, making it a more interactive space.

All the above efforts reflect that radio is being used as a medium that can add value to the complete ad campaign followed. This is also reflected by the fact that all major newspapers have opted to go in for their own radio station to give a synergy effect. Following table lists a few publication houses with their radio channel:

NEWS PAPER	RADIO CHANNEL
Times of India	Radio Mirchi
Hindustan Times	Radio fever
Mid day	Radio one
Dainik bhaskar	My FM
Jagran group	Radio Tadka
India today	Oye 104

CONCLUSIONS

Radio is emerging as a proposing medium to advertise on. In the media mix along with other media radio today is being harnessed by advertisers. The mobile telephony has also given a boost to the media. The major conclusions can be grouped as effectiveness of radio as a medium of advertising and efforts made by radio stations to build relationships with listeners.

Effectiveness of Radio

Radio operators have entered into a 360 degree promotional idea, whereby they combine radio with other media. This concept has been employed by radio operators to overcome their limitation as a medium that has zero visual value. Advertisements on radio are effective only if the same are run with high frequencies. Advertisers are at loss of evaluating the effectiveness/ ROI value for the ad expenses incurred on radio. To counter this limitation, radio operators come out with various promotional tie ups (with other media and/or advertisers) and conduct competition on radio through which they can give numbers to the advertisers as to listenership to their advertisement based on responses received to the competition conducted. Similarly on ground activity, like sponsored events, also gives visual presence to the advertisers, as their logo is displayed at the venue with the radio operator's logo and also provide a chance to interact directly with the consumers.

Radio operators carry out new concepts in form of activation and amplification so as to get better reach and attract clients towards radio. Advertisement run on radio have no visuals attached with it. To overcome these limitations, the operators do on ground activities through which the visual presence is felt of the advertisements and the advertisers. On ground activities are called activations, in addition to these they enter into cross promotion with tie-ups with other medium like news paper.

We find that major publications have their own radio stations and a cross promotional activity can be easily carried out. Also a combined deal for radio and news paper would give the desired cost benefit advantage and also give better reach. The ads seen in newspaper in morning is recalled again when the listener listens the same product advertisement on radio during the day.

Based on various efforts made by the radio operators the medium is being used as an add-on to any other advertisement media. Because of its low cost advantage, radio is finding a place into advertisement mix. Radio is one of the two new media, other being the internet, which have emerged in last one decade. With the efforts of radio operators the medium is growing in terms of high listenership values.

Radio listenership has gone up because of the easy access through mobiles. This factor plays an important role as radio through mobile handsets, gives on the move reach to listeners and advertisements can be heard without the restriction of localized destination as is the case with mediums like TV, internet etc.

To achieve higher listenership the operators conduct various researches to identify the most listened songs. They also conduct a sample survey by playing song clips of new songs released in a particular week, and take feedback from the sample group.

All the above points lead to an increase in listenership of the radio station which in turn leads in to the flow of advertisers towards a station. Lack of any proper radio listenership measuring agencies, except for the metros where radio advertisement measurement (RAM) conducts listenership analysis, operators rely more on relationship marketing. This is one factor which goes against radio as the decision making is done more on relationship rather than being supported by statistical data. All the more reason for the advertisers to use this media to enhance the effectiveness of ads released in other media like TV and/or news paper.

Building Relationship

Radio operators have their own web portals through which they interact with the public by providing various options in terms of music selection interaction with radio jockey, (RJ). This helps the operators to be in constant touch with its listeners and understand their preferences. The long term implication of this is to get the pulse of the listeners and also understand the taste and preferences of the listeners. The advertisers can make use of these portals to have additional promotional options and understand the listenership profiles for the radio stations, to help them select one to match their product profile with listenership profiles.

The RJ also has their presence on social networking sites where they try to increase their fan followers, and thus drive traffic towards respective radio stations. RJ mentions is another way the advertisers can use radio to promote their products. Instead of just releasing an advertisement on radio, the RJ, who has his own fan club, can speak few words about the advertiser's product, this can work more like celebrity endorsement and it surely has a good impact on the listeners as explained by the radio station heads.

The main attraction for listeners to tune in a radio station is the music that is played on. Radio operators employ various methods to identify and understand the choice of the listeners and then play the music accordingly. The loyalty towards the station is established based on the interactive means through web portals and presence on social networking sites. Higher the listenership better is the reach of the station and more chance of the advertisement to reach the target audience.

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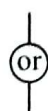
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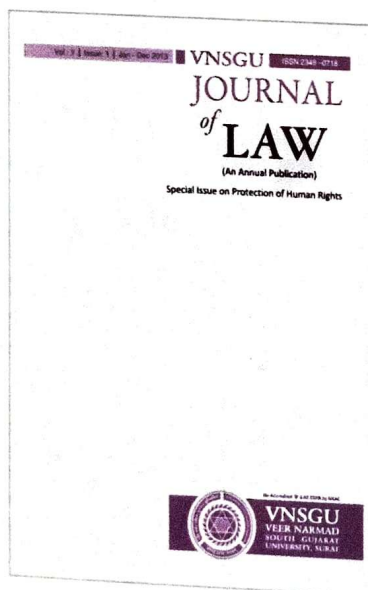


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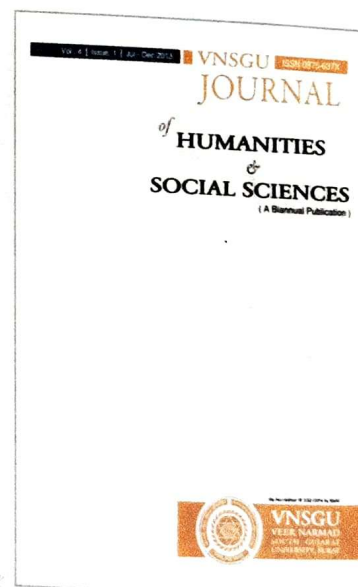
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