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PRESIDENTIAL REMARKS

Dear Colleagues,

I am grateful to you for electing me as President of IAA for the year 2015. The trust and confidence reposed by you is a big strength for me. I am fully conscious of great responsibility put on my shoulders. I do hope, with kind co-operation and active participation of all members of IAA, I will be able to discharge it. In fact, every office bearer has to join a relay race. My predecessors have made significant contribution to the growth of IAA. I will carry the baton further. If not a landmark tenure, at least I promise you to leave some mark on sand dunes of time during my tenure.

37th Annual Conference recently held at University of Lucknow, has discussed two subjects of contemporary relevance. First one is Commodity Markets and Risk Management. Commodity future trading has become eye sore for farmers and consumers both. Our members at local chapters may undertake research projects to answer an issue of national significance – What is the social contribution of Commodity Futures Trading in India? Should it be banned to protect the interest of farmers and consumers?

Second area of great public concern is role played by Creative Accounting in big corporate frauds. Can IAA do something to minimise accounting rule loopholes in order to minimise scope for committing corporate frauds via creative accounting? Branches should motivate and support such research endeavours by their members. After holding annual conference we should not go to sleep till next annual conference. I stress upon follow up action on conference findings. The real strength of a federal body like IAA lies in the academic activity of its branches. Branch office bearers must take due care of funds sharing, academic activity organizing, periodical reporting to Secretary General of IAA under our by – laws. Defunct branches be either revived or closed down by members. Housekeeping and timely compliance with by laws by branches is urgently called for.

Friends, you may agree with me that accounting academics and accounting professionals must work in close collaboration. C.A. and CMA curriculum reforms, examination reforms, standardization of practice must draw our close attention. In fact, we should lead such reforms rather than to follow. Academics must spare more time for innovations and reforms in accounting education.

Now UGC has derecognized several degrees like Master of Financial Analysis and Control (MFC). The universities can use either M.Com (Accounting and Finance) or MBA (Accounting and Finance). Make your choice with due care. But, I am sure, if we maintain high quality then Accounting and Finance functional specialization degree holders will be in high demand for teaching, research and professional practice.

38th Annual conference of IAA will be organized at Punjab University, Chandigarh. The topic for the conference is (1) Role of Accounting in Building the Nation, (2) Behavioural Accounting and (3) Integrated Accounting. An International Seminar on Accounting Education and Research is also scheduled during the conference. I appeal to all members to start research projects at the earliest in order to enable them to submit quality research papers in time for review, presentation and publication. There are welcome to contact chairpersons and/or office bearers for any academic guidance.

I wish you all a very Happy and a Prosperous new year.

Professor Pratap Singh Chauhan

Vice Chancellor (Acting)

Saurashtra University

Rajkot – 360 005

Email: drpratapsinhchauhan@yahoo.com

EDITORIAL

Welcome to the volume XLVI issue 2 of Indian Journal of Accounting, the Journal of Indian Accounting Association. The Journal has been well received by the research community at national and international level. It gives me immense pleasure to report that the journal has been included in the data bases of **Electronics Journal Library (EZB)** and the inclusion of journal in a few more databases is under process.

The past two decades have been marked by frequent transition in country. If we pay attention to recent changes we see that the nation is heading towards transparency. The judicial system evident fairer and strict dealings against corruption, mandatory disclosures, tax evasion, money laundering etc. ignited the same. Lack of transparency and accountability will lead to erode the trust, and damages the business environment. Ultimately, this can hold back the economic growth. Foreign investments (FIs) are going to play a prominent role in the economic development. To combat these myriad challenges the industrialists will have to change their mind set in the wake of dynamic work culture. The efforts are to be made in the direction of preparing altogether new work culture whereby "Let go" attitude has to be replaced by "Deliver your Best."

Till date we have been discussing Net profit and (Return on Investment) ROI. Why don't we talk about "Shubh-Labh" (Goodness & benefit)? In Manusmriti, it is mentioned that one should safe guard money for himself and his family to fulfill their necessity and protect their life without pejorative remarks. I earnestly pray and hope that all our members of IAA will work as a team to promote accountability and fairness as a discipline and disseminate the same through research work.

The current issue of IJA has the honor of including research papers by enthusiastic researchers of Accounting. I would like to thank to all contributing authors for providing such a variety of outstanding research articles on a broad range of emerging issues. The research paper of Manish Sharma is an important contribution in analyzing the relationship between organ banking and industrialization in Japan. Readers who are interested in knowing the Corporate Governance and reporting may find the review papers of Tamanna et al and Sanjay Bhayani suitable. The in-depth studies of Banerjee, Varyani, Bhanawat and Raju may unfold the new insights in accounting education, reporting and creativity. The quest of readers regarding stock market timings, announcements, performance and macro economic variables may be fulfill by the work of Rijwani, Kirubakran, Singh and Tripathi.

Those who wish to understand the determinants and impact of capital structure, and working capital may find the papers of Mand, Kaur and Paul interesting. Kumar studied the impact of mergers on corporate performance which will help readers in understanding the effect of corporate restructuring. At last, journal includes a case study by Velankar and Gupta on management of Non Performing Assets, which has become a critical issue in banking sector.

We look forward to receiving more research papers for future issues and encourage further submissions. Hope you would like and appreciate the efforts of our editorial team and may enjoy this issue.

Wishing our valued readers a very happy New Year 2015!

Prof. Umesh Holani
Chief Editor, IJA
Journal of Accounting Association

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ROLE OF SMALL BANKS IN EARLY INDUSTRIALIZATION OF JAPAN

Manish Sharma

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ABSTRACT

This paper investigates the relationship between the industrialization and the development of banking system in Japan in the early twentieth century. We focus on the role of so-called “organ banking” that kept financial and personnel tie with borrower firms. Because of their concentrated loan portfolios, these small banks were dependent on the performance of the borrower firms. The vulnerability prevented the organ banks from mobilizing sufficiently large amounts of deposits. The organ banks were considered to be the likely cause of widespread bank runs. Conventional view criticizes the organ banking as a poor model of financial intermediation. This paper proposes an alternative narrative that organ banking was a fairly efficient model that venture enterprises could make use of at the earlier stages of industrial development when institutional infrastructure was not mature enough to protect investors’ rights and to mitigate agency problems associated with financial transactions. Thus, in spite of its fragility the organ banking was not incompatible with rapid industrialization when newly established enterprises needed only a limited amount of external funds.

Key Words: Related lending, industrialization, bank-based financial system, financial history, Japan

INTRODUCTION

In Japan’s financial history, the first two decades of the twentieth century were replete with the frequent episodes of financial instability. More than five hundred banks were forced to close mainly due to managerial difficulty during those turbulent decades. This was 13% of the total number of banks (4,175) existing at the end of 1901. The numerous bank closures during the two decades were associated with frequent bank runs and holidays. The chronology prepared by the Research Institute for Monetary Study (1993), the Bank of Japan, shows various instances of bank crises (see Annexure). The fragility of the banking sector finally spewed out in the large scale bank turmoil of 1927 (Also referred to as Showa financial crisis).

The conventional view suggests that the business model of ‘organ banking,’ a form of related lending prevalent in the earlier twentieth century, was mainly responsible for the banking instability (Kato, 1957; Goto, 1977). Organ banking was a peculiar business model undertaken by banks, wherein they had close financial and personnel ties with borrower firms. The loan portfolios of these banks were highly concentrated on those related firms. Consequently, these banks were at the mercy of ups and downs of their related firms. Accepting the conventional view, Ministry of Finance (henceforth MoF) tried to control the number of small banks.

This conventional view ignores the fact that in spite of the financial fragility, Japan achieved fairly rapid industrialization during these two decades. If organ banking was actually unproductive, *a la* “conventional” wisdom, then what explains the remarkable industrial development? This paper explores this paradoxical conundrum.

THE ROLE OF FINANCIAL SYSTEM IN JAPAN’S INDUSTRIALIZATION

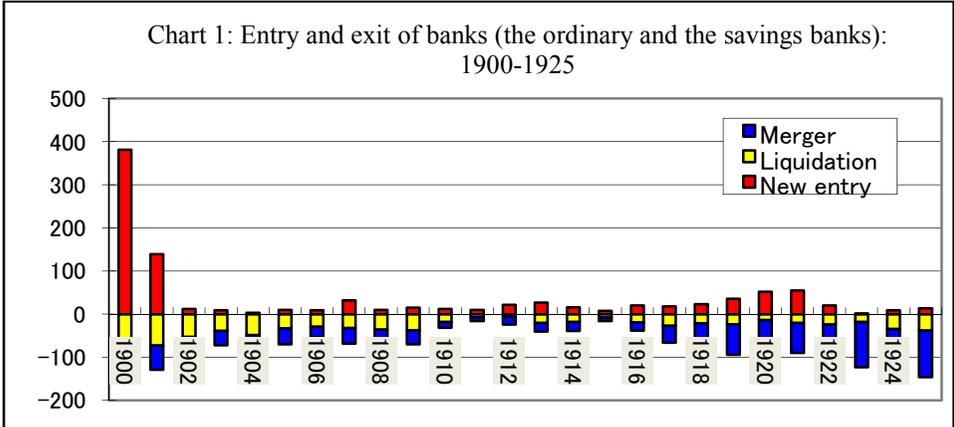
In Japan, until the early twentieth century, the barriers to entry into the banking sector were virtually non-existent. The rapid industrialization coincided with the large number of small banks. Many small banks had close links with borrower firms and their loan portfolios were insufficiently diversified. Some of the banks were established directly or indirectly by entrepreneurs to raise external funds for their own or related companies. Those banks are called the “organ bank” (*kikan ginko*). Teranishi (1982: 308) defines the organ bank as an “industrial bank” that was controlled by the same directors or owned by the same shareholders of specific firms; the bank, in turn, prioritized those firms in their credit supply at the expense of diversifying its loan portfolio. The lack of diversification might be related to the small size of banks, because the cost of sufficient diversification of loan portfolios was grossly prohibitive for small banks.

Clearly the banks adopting organ banking model were likely to suffer from fragility because their loan portfolios were highly concentrated on a small number of borrowers. Borrower firms’ bad performance could have easily destabilized these banks. Further, as the collateral concepts such as deposit guaranty did not exist, the fragility in the bank management was an assured-recipe for the bank run. As Chart 1 shows, during the first two decade of the twentieth century, 561 commercial banks were liquidated due to failure and other reasons. This figure does not include the 657 banks that were absorbed into other banks because of mergers.

Many argued that the organ banks were the ultimate cause of the recurring episodes of financial instability during the early twentieth century. Therefore, the Japanese government embarked on an important policy initiative to shake the banking sector.

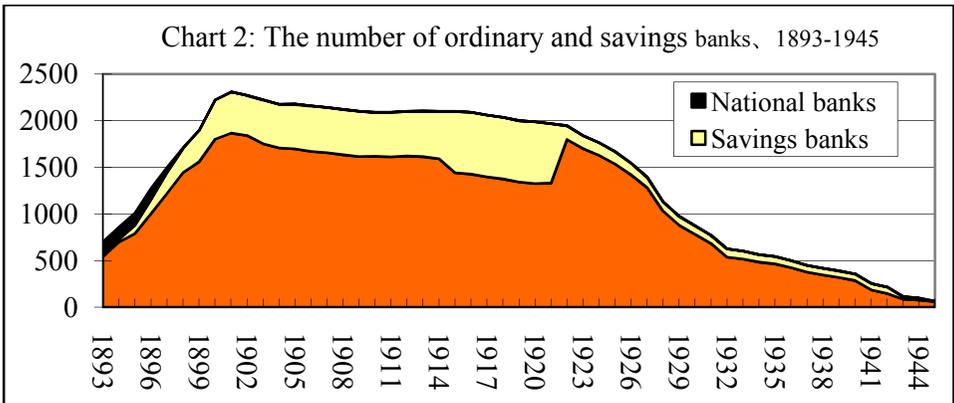
Government policy against the organ banking

From the late 1900, several provinces experienced widespread bank runs. The government responded by issuing an administrative order in 1901, to curtail the entry of small banks. This was the starting point for the government to control the number and business scale of the banks.



Source: Goto (1970)

As a result, the number of banks began to decline (Chart 1). The policy adopted by MoF surely contributed to the decline in the number of banks since the early 1900s (Chart 2).



Source: Goto (1970)

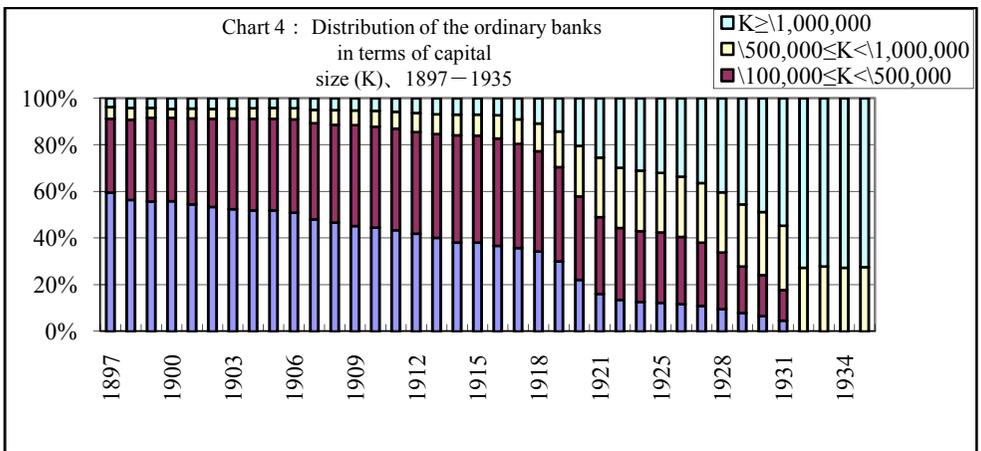
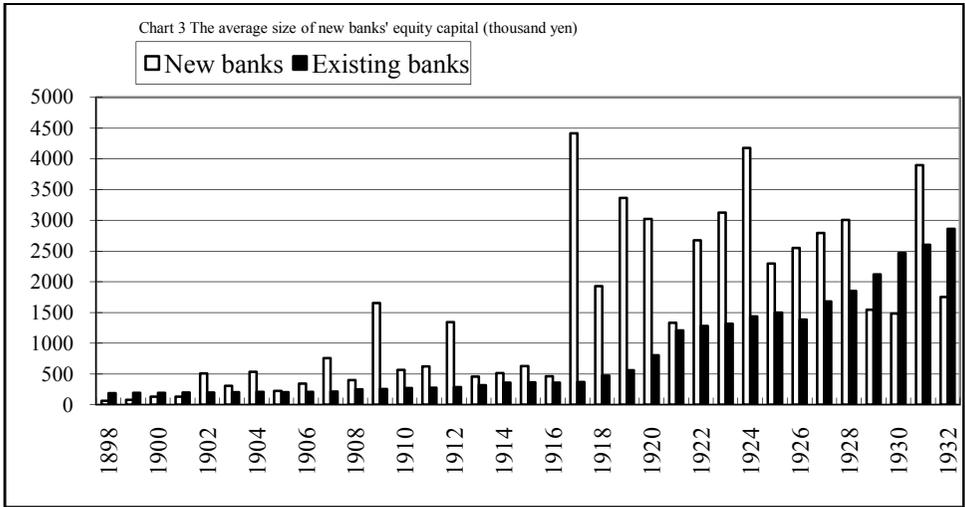
It is also noteworthy that despite the substantial increase in the minimum capital requirement of newly established banks vis-à-vis the average capital of the existing banks (Chart 3), the administrative orders of MoF since 1901 did not greatly reduce the relative share of small-sized banks until the late 1910s. Chart 4 shows the distribution of the ordinary banks in terms of official equity capital. This shows that the small banks

ROLE OF SMALL BANKS IN EARLY INDUSTRIALIZATION OF JAPAN

with capital below ¥0.5 million, continued to command a sizeable market share of more than 80% until 1917, in spite of the government policy of reducing the number of small banks.

Reconsidering the Role of Organ Banks

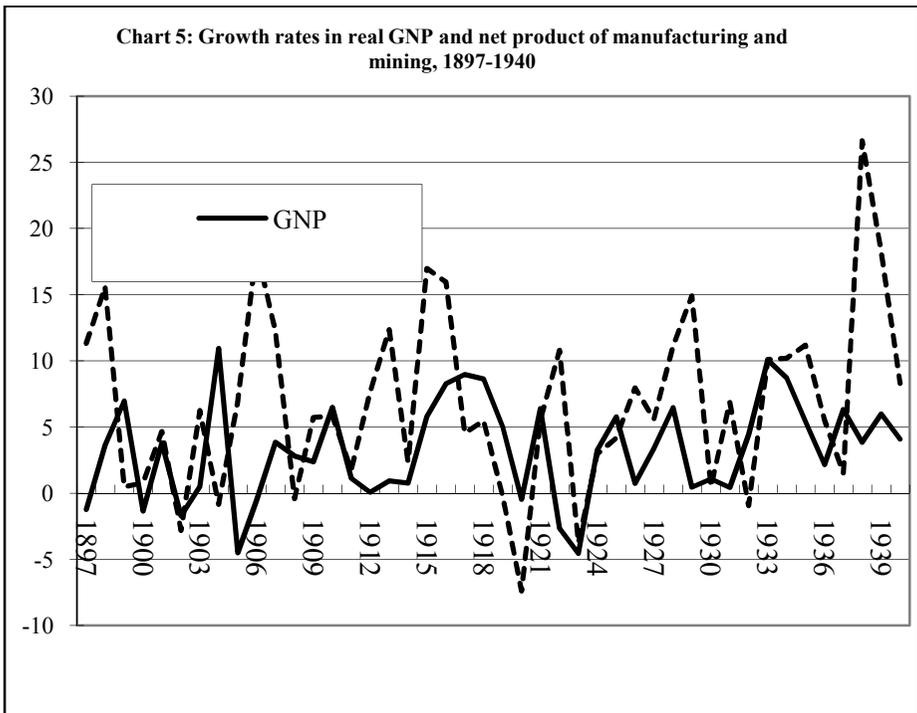
Many scholars, while considering the instability of Japanese banking sector in the early twentieth century, tend to put the onus of fragility on to the entrenched business practices, more concretely typified by organ banking (Okazaki and Yokoyama, 2001).



Source: Goto (1970)

There are a number of documentary evidence that chronicle numerous cases of mismanagement and acts of swindling by the managers of organ banks (Shibuya, 1975). The conventional and oft-cited belief suggests that organ banking hindered the industrialization of the Japanese economy at the beginning of the twentieth century. The inherent systemic weaknesses finally erupted in serious bank crises during the 1920s, which forced the government to undertake a fundamental “regime-shift”. With the enactment of Banking Law in 1927, the total restructuring of the banking sector became a state priority.

Does this mean organ banking was an unproductive model, as the conventional view suggests? There are some reasons that point in a different direction and thus, we question the conventional wisdom. Firstly, in the early twentieth century, in spite of the instability in the banking sector, the Japanese economy accomplished industrialization at a decent pace. For example, during the intervening two decades from 1901 to 1920, the average annual growth in real GNP and in net product of manufacturing and mining were 3.2% and 5.8% respectively (Chart 5; these growth rates are calculated from the estimates given by Ohkawa et al, 1974).



Source: Ohkawa et al. (1974)

According to Ministry of International Trade and Industry, (1961; henceforth MITI), the number of employees in the industrial sector grew annually at an average rate of 7.2%

ROLE OF SMALL BANKS IN EARLY INDUSTRIALIZATION OF JAPAN

from 1908 to 1920. These figures are not inconsequential, considering the early stages of industrialization. The co-existence of so-called inefficient banking, with this noteworthy industrial growth is hard to deduce, let alone the impossible task of reconciling it with the conventional view.

Secondly, as we have already pointed out, the relative share of small banks in the banking sector remained remarkably high until the late 1910s (Chart 4). If small banks (e.g., the banks with equity capital of less than ¥0.5 million) were particularly inefficient and fragile, then why their share did not decline substantially? In a deliberate attempt to prevent new entry of smaller banks, the MoF issued an administrative guidance order in 1901. On the other hand, the entry of large banks was not restricted at all. Should it be surprising then, that the number of small banks vis-à-vis bigger banks did not decrease, during the following two decades?

The fact that the share of small banks remained stable despite the policy of MoF to prevent entry of smaller banks suggests that, as against the general perception, they served a productive function. The data prepared by the MoF in 1933 is very useful in verifying and validating this fact. The data is comprised of 213 banks that experienced managerial trouble resulting in their closure, from May 1910 to March 1915. According to the data, among the troubled banks, the share of bigger banks (with equity capital of ¥0.5 million or more), and small banks (with equity capital of less than ¥0.5 million) was 29.5% and 79.5% respectively. However, the relative share of the big and small banks was 10.7% and 89.3% in 1910, and 15.3% and 84.7% in 1915 (see Table 1). At least from this data we cannot conclude that during the 1910s the smaller banks were more fragile than the larger ones (Also see Teranishi, 1982).

Table 1: Distribution of troubled banks according to the amount of equity capital

The number of banks and percentage

Size of equity capital	MOF's data of troubled banks from May 1910 to March 1915	As of 1910	As of 1915
Equal or more than ¥0.5 million	43 (20.5%)	228 (10.7%)	319 (15.3%)
Less than ¥0.5 million	167 (79.5%)	1,903 (90.3%)	1,769 (84.7%)
Total	210* (100.0%)	2,131(100.0%)	2,088(100.0%)

Source: Ministry of Finance (1933)

Note: Number of troubled banks was 213, but equity capital was ambiguous for three banks, which were deleted from this table.

Governance structure of an organ bank management

We showed that the relative share of small banks stayed at the level higher than 80%, in spite of the MoF's policy of restrictive entry and the relative proportion of the banks that were closed due to managerial difficulty was also not higher for small banks. This suggests that the organ banking was not as fragile as the conventional view suggests.

Here we propose the hypotheses that the organ banking was an effective way of financial intermediation and that the financial situation in the early twentieth century offered a sort of equilibrium under the organ banking.

In order to mitigate agency problem in the process of financial intermediation, we need an effective system of monitoring. Diamond (1984) contends that a large scale bank with sufficiently diversified loan portfolio is an ideal business model to attain efficient financial intermediation. Investors deposit their money to the large bank and delegate monitoring of borrowers to the bank. The bank can reduce risk for investors (i.e., depositors) to a bare minimum by fully diversifying loan portfolio.

However, as Cerasi and Daltung (1994) argue, we should recognize the increasing cost of monitoring as a loan portfolio becomes more diversified (Also see Freixas and Rochet, 1998). Specifically, monitoring is performed by loan officers, who in-turn, have to be monitored by the banker. We could factor in the increasing cost of the internal monitoring: i.e., the additional delegation becomes more and more costly as the size of the bank increases since more and more officers have to be hired and trained. A trade-off exists between benefits of diversification and the costs of internal delegation. Establishment of a bank with adequate human resources capable of monitoring various industrial firms, at the early stage of industrialization, could be prohibitively expensive, due to acute scarcity of human resources with monitoring skills. Diamond (1984) does not consider the issue of scarcity of human resources needed for delegated monitoring. Thus, the financial system has to economize monitoring in order to effectively support industrialization. One of the most effective means to economize the monitoring would be to virtually integrate the interests of a borrower firm with a bank, by forming a mutually-dependent close relationship, precisely the business model of "the organ banking." Offering a similar case, Lamoreaux (1986) discuss the functionality of kinship-based banking system in the process of industrialization of early nineteenth- century New England.

It should also be noted that the organ banks raised funds by mostly issuing demandable liabilities. As Diamond and Rajan (2001) suggest, the demandable liabilities would play an important role when the performance of fund-raisers is extremely obscure for investors in the immature capital market where institutional infrastructure such as effective legal system to protect investors' property right and transparent disclosure rules is unworkable. The demandable liabilities would give wider discretion to investors than any other financial instrument. For instance, when investors feel uneasiness in an

issues' performance, they could quickly cancel the demandable liabilities. They could also expect the pressure of quick cancellation of liabilities (i.e., bank runs) to discipline borrowers towards sound management. Of course, in order to make demandable liabilities effective, the issuers must make commitment to the liabilities. To build up a special institution (i.e., a bank) following specific legal procedures and the status of depositors given by the law, was instrumental for bank managers to make commitment to their liabilities.

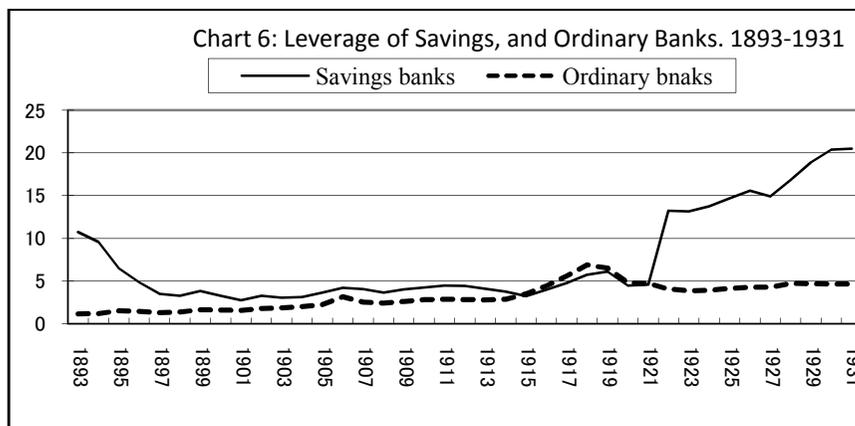
Industrial firms were not allowed to issue demandable liabilities (Diamond and Rajan, 2001, propose a theoretical reason for this restriction). But if they can establish a bank directly or indirectly, venture enterprises could make use of facility of demandable liabilities to effectively raise external funds. This is the business model of the organ banking. As we have emphasized, this business model is quite risky. Rational investors would not supply a large amount of money to these financial schemes. Therefore, the capacity of external fund-raising by the organ banking was severely limited. But as long as the demand for external funds was not large, as was the case during the earlier stage of industrialization this business model worked. At the same time, the possibility of banks runs was an important ingredient of this peculiar form of financial intermediation. Considering the immature capital markets, organ banking was a rational and seemingly obvious arrangement. In this light, the fragility of the organ banking and rapid industrialization could be consistent with each other.

Related lending, agency cost and high leverage

The close connection between a bank and its client firms with a view to reducing agency costs between them would worsen the agency problem between investors (depositors) and a bank because the relationship produces opacity in the banking operations. Investors cannot precisely assess the soundness of bank management although they understand that the bank's deposit is risky due to lack of diversification. The opacity gives a bank and the managers of the industrial firm opportunities to exploit investors. So, the investors are expected to be very cautious in depositing their money in a bank. In other words, the organ bank is unable to mobilize a large amount of deposits. Thus, under the organ banking, banks' leverage (i.e., the amount of deposit liabilities divided by equity capital) would have to be low, because bank managers and shareholders need to invest relatively larger amount into their banks, in order to set depositors' mind at ease.

Chart 6 shows that until the late 1920s, the leverage of ordinary banks in most cases remained below 5, although gradually it increased. During the high growth period after World War II, MoF gave banks guidance that they should keep the ratio of equity capital to deposit liabilities at 10% or higher, which implies that the banks' leverage should be less than 10. But this guidance was ineffective. The actual banks' capital/deposit ratio

was on the average substantially lower than 10% (around 6%), which implies banks' leverage was higher than 15. As of March 1981, the average of banks' leverage was 29.5. Clearly, banks' leverage was surprisingly low at the beginning of the twentieth century.



Source: Goto (1970)

Note: Leverage is a ratio of total deposit liabilities over equity capital. Equity capital is the sum of paid-in-capital and reserves.

Influence of the Bank Law Of 1927

The severe bank crises during the 1920s finally compelled the government to enact a new law (the Bank Law of 1927), to fundamentally reorganize the Japanese banking. The most important purpose of this new act was to exclude small banks from the Japanese banking by statutorily stipulating the minimum amount of equity capital (¥2.0 million for those located in the large city, and ¥1.0 million for other banks). Those banks whose equity capital was less than the minimum amount were ordered to increase their capital not by injecting their own capital, but by mergers with other banks within five years (Kato, 1957). Although this new Law did not specify regulation of 'loans-to-one borrower' limits, its detailed enforcement regulations (*Sikou Saisoku*) prescribed that if a bank's claims for a borrower was larger than 10% of the banks' equity capital, MoF could order the bank to decrease the claims. This was to restrain the organ banking (Kato, 1957).

Chart 2 shows a sharp decline in the number of banks since the early 1920s. The administrative guidance of MoF was responsible for this decline and the Bank Law of 1927 further promoted it. The number of banks drastically decreased from 1,396 in 1927, to 65 in 1945. As a consequence, the average size of banks substantially increased during these eighteen years: for example twelve folds in terms of banks' paid-in capital, and two hundred forty folds in terms of deposits for the ordinary banks. Further, Bank Law decreased the equity capital invested in the Japanese commercial banking in both

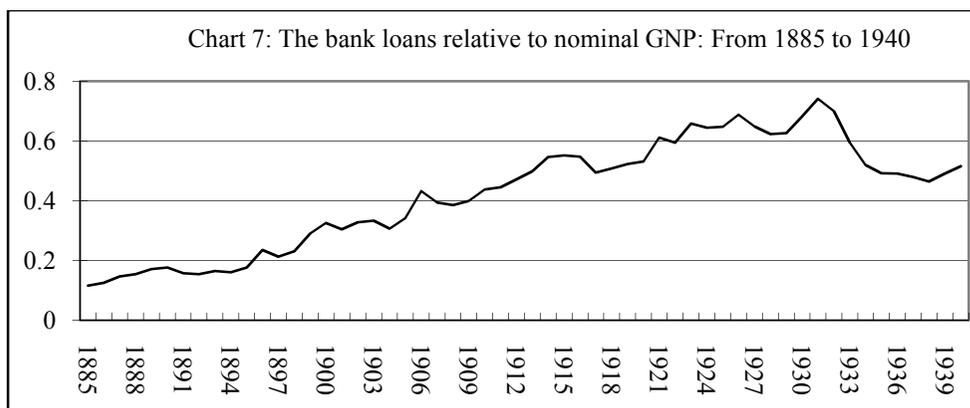
ROLE OF SMALL BANKS IN EARLY INDUSTRIALIZATION OF JAPAN

nominal and real terms for the first time since the end of the nineteenth century (Table 2).

Table 2: number of banks and their equity capital

Year	The number of banks			Banks' capital (¥1.0 million)			Deflator (B)	Real capital (A)/(B)
	Total	The ordinary banks	The savings banks	Total (A)	The ordinary banks	The savings banks		
1885	908	817	91	80.0	74.7	5.3	0.477	
1898	1,758	1,485	273	307.2	279.7	27.5	0.715	167.7
1901	2,333	1,614	719	416.5	304.2	112.3	0.760	429.7
1913	2,102	1,455	647	675.5	506.2	169.3	0.760	548.0
1919	1,997	1,339	658	1,396.9	1,060.6	336.3	1.123	888.9
1927	1,391	1,279	112	2,535.2	2,439.0	96.2	0.937	1,243.9
1932	620	534	86	1,986.7	1,896.4	90.4	0.879	2,705.7
1942	213	145	68	1,443.6	1,366.7	76.9	n.a.	2,260.2
1945	65	61	4	1,517.9	1,445.4	72.5	n.a.	

The restructuring of the banking on the initiative of MoF led to a sharp decrease in banks' credit capacity. In Chart 7, which shows the ratio of bank credit to nominal GNP, we can observe a remarkable dent in the bank credit during the 1930s. Table 5 shows the structure of major companies' financing. Clearly, these major companies reduced the outstanding amount of bank loans during 1927- 1936, when the ratio of bank credit to GNP dropped substantially (Chart 7).



Source: Ohkawa et al. (1974)

The restructuring started by the Bank Act of 1927 undeniably reduced the credit capacity of banking sector during the 1930s. This brings us to a more pertinent issue:

What was the impact of the decline in banking capacity on the real economy? The right end of Table 3 shows the average real GNP growth rates for respective periods. According to this table, the decline in banking credit capacity was not accompanied by lower GNP growth rate. Chart 5, which shows the growth rates both in real GDP and manufacturing and mining production index, conveys the similar impression to us. Thus, apparently, it did not seriously damage the real economy.

Table 3 : Financing structure of “major” companies and Japan’s real growth rate

Period	Retention	Stock	Bonds	Borrowing from banks	Real GNP growth rate (annual rate)
1897-1913	3.6	32.4	6.5	57.5	2.00
1914-1926	1.9	38.2	12.6	47.3	3.53
1927-1936	21.6	80.4	27.4	-29.4	4.26
1937-1944	11.1	24.5	23.8	40.5	5.05*

Sources: IBJ (1957) and Ohkawa et al (1974).

Note: * Average for 1937-1940.

However, we should be sufficiently cautious in deriving any definitive conclusion regarding impact of the decrease of banks’ credit capacity on real economy. We must take small and medium sized enterprises into consideration when assessing the effects of a decrease in banks’ credit on the real economy. It is so because, in general, the small and medium enterprises suffer from more serious agency problems than big companies. This difficulty forces them to depend on banks credit more intensively (See Petersen and Rajan, 1995; Boot 2000). In the following paragraphs, we analyze the effect of bank restructuring on industrialization.

OBJECTIVE OF THE STUDY

In order to understand the industrial development under the financial fragility that Japan experienced during the early stages of industrialization, we need to recognize productive side of the organ banking.

We stress that, in spite of the obvious fragility, the organ banking was an efficient way of financial intermediation under the immature financial system where the ideal form of banking with sufficiently diversified loan portfolios was infeasible (Diamond, 1984). Pointing out this conundrum, Diamond and Rajan (2001) argued that financial fragility is a desirable characteristic of banking. Their general hypothesis contends that banks’ fragile capital structure allows it to create liquidity, even though their loans remain illiquid.

HYPOTHESES

In order to understand the influence of the Bank Law of 1927 on regional industrialization, following two hypotheses were framed:

Hypothesis A: the prefecture, which experienced a higher growth rate in banks’ equity

capital during the five year period, achieved higher growth in the industrial production in the same period.

Hypothesis B: The prefectures with higher proportion of chemical and metal industries in their total industrial production suffered less damage from the decline in banks' capital.

RESEARCH METHODOLOGY

The bank restructuring that MoF promoted, with the enactment of the Bank Law of 1927 to wipe the organ banking out, might have been damaging to some enterprises which rather intensively depended on the banking services. This conjecture is supported by a simple empirical analysis using the data of regional distribution of industrial production from the late 1920s to the early 1930s.

For our analysis we use the data of annual industrial production of 47 prefectures from 1919 to 1947, prepared by MITI (1961). Using this data, we statistically investigate whether the policy of bank restructuring adopted by MoF since the Bank Law of 1927, which led to the decline in banks' equity capital, had negative impact on regional industrial growth. To analyze the immediate effect of the Bank Law of 1927 we test these two hypotheses (covering five years period in between 1928-1932).

The implication of hypothesis A is that the bank restructuring can be the reason behind slow industrial development at least immediately after the implementation of the Bank Law of 1927, because the prefectures' bank capital decreased on average 3.4% per year from 1927 to 1932. Before taking up the statistical analysis, however, we should note that the data of the MITI does not cover the companies that employed less than five employees. Those companies belonged to the smallest end of the industrial sectors in those days, and were likely to be most heavily dependent on bank credit, and thus, were most seriously affected by the decline in the banks' capacity. Our statistical test might be an underestimation of the negative impact of the decline in banks' capital.

RESULTS AND DISCUSSIONS

The analysis started with the modeling of dependent variable, which was the annual real growth rate in industrial production of each prefecture $GRY_i(32/27)$ ($i = 1, \dots, 47$) and the independent variables, which included : past industrial growth rate (over the thirteen years from 1914 to 1927) of each prefecture $GRY_i(27/14)$, which account for the possible inertia (or the path dependence) of industrial development, and the growth rate of banks' equity capital in each prefecture $GBE_i(32/27)$ during the same five year period from 1928 to 1932. Some may be concerned about the simultaneity bias between $GRY_i(32/27)$ and $GBE_i(32/27)$. However, we assumed that, in those days, the changes in banks' equity capital were controlled by MoF totally independent from the regional industrial production. The result of the OLS estimation is as follows:

$$(1) \quad GRY(32/27) = 0.00610 + 0.509 GRY(27/14) + 0.0884 GBE(32/27)$$

$$(0.0291) \quad (0.384) \quad (0.123)$$

$$R^2 = 0.0564; SE = 0.0542;$$

The figures in parentheses are standard errors.

The coefficient of GBEi(32/27) is positive, but statistically insignificant. This result rejects the hypothesis A.

Upon careful observation, it appears that the exclusion of the smallest enterprises from the sample should be the reason of this weak result, because banking in those days was more important for small enterprises than for the larger ones (Table 4). More importantly, the financial intermediation through banks, particularly through organ banking, was not indispensable to some industries such as heavy and chemical ones involving relatively large companies, most of which were financially supported by both the traditional and newly established *zaibatsu* (conglomerate) groups.

Table 4: Relative importance of heavy and chemical industries to the manufacturing in Japan

	Food	Textiles	Heavy and chemicals	Others and total
1890	51.0	22.9	10.5	100.0
1900	48.9	24.4	12.6	100.0
1910	39.0	27.3	18.7	100.0
1920	31.6	26.3	32.3	100.0
1930	25.5	28.1	25.0	100.0
1940	13.0	17.1	59.2	100.0

For those industries, the decline in banks' capacity was not so damaging. But for those industries which were dominated by small enterprises, the banking services were indispensable. The decline in banks' capacity was supposed to be damaging to those industries (viz. Food, textile and other light industries). This brings us to test hypothesis B:

For this, we introduce INDi(27), which presents the share of production of both chemical and metal industries in the total industrial production as of 1927. Then, the cross term between INDi(27) and GBE(32/27) is expected to have a negative coefficient if the Hypothesis B is true. The re-estimation produces the following result:

$$(2) \quad \text{GRY}(32/27) = - 0.0117 + 0.673\text{GRY}(27/14) + 0.235\text{GBE}(32/27) - 2.517\text{GBE}(32/27)*\text{IND}(27)$$

$$(0.0298) \quad (0.383) \quad (0.143) \quad (1.343)$$

$$R^2 = 0.128; SE = 0.0527$$

The coefficient of GBEi(32/27) is positive, and that of the cross term GBEi(32/27)*INDi(27) is negative, and both of them are modestly significant (at the 10% significance level).

The estimated result (2) presents a simple but intuitively understandable implication. That is, the decline in banks' equity capital was damaging for the industrial growth in those prefectures where the relative importance of chemical and metal industries was small. More precisely if the share of these two industries in the total industrial production was less than 9.33% as of 1927 (i.e., $INDi(27) < 0.0933$), the lower growth in the banks' capital would have led to the lower industrial growth $GRYi(32/27)$. For example, the industrial growth in Yamanashi Prefecture, where the relative share of chemical and metal sector was very low ($INDi(27) = 0.0063$), was minus 8.4% per year ($GRY(32/27) = -0.084$) and the growth rate in banks' capital was minus 7.5% per year ($GBEi(32/27) = -0.075$) during the sample period from 1928 to 1932. If the banks' capital had stayed at the same level during the period (i.e., if $GBEi(32/27) = 0$) in Yamanashi, the industrial growth rate would have been at minus 6.8% ($GRYi(32/27) = -0.068$). By the similar reasoning, in Gunma Prefecture (whose $INDi(27) = 0.01923$) the industrial growth rate would have been not minus 5.0% but minus 2.7% if its growth rate of banks' capital had been zero instead of minus 11.8%.

In contrast to this, those prefecture where the share of chemical and metal industries was relatively high (specifically $INDi(27) > 0.0933$), the decline in banks' capital did not hinder the industrial growth during this period. For example, Tochigi, Kanagawa, Niigata, Toyama, and Yamaguchi were such prefectures that attained a positive industrial growth rate during the sample period despite negative growth in their banks' capital because the heavy and chemical industries were relatively important among their industrial sectors.

The statistical analysis in this section suggests that, although the banking restructuring led by MoF's initiative since 1927 did not seem to hinder the industrial growth as a whole during the early stage of the restructuring policy, the regions that intensively relied on the light industries were negatively influenced by the decline in banks' equity capital associated with the MoF's policy. Clearly, the organ banking was an effective financial method for small enterprises. But Bank Law of 1927 forced out this specific business model from Japan's banking. Overall, this policy seems to be successful in stabilizing the Japanese banking industry since the late 1920s. However, our analysis suggests that most small enterprises probably were adversely affected by the bank restructuring policy. Since the late 1920s and early 1930s, the number of anecdotal reports which criticized the severe credit crunch for small and medium sized businesses, abruptly increased (Kato, 1957; Shimura, 1969; Fujino and Teranishi, 2000). We think that it was not a mere coincidence.

CONCLUSION

As the heavy and chemical industrialization proceeded after World War I, the enterprises needed to raise much larger amounts of external fund, and the organ banks

were forced to increase their leverage higher than before. Then, the fragility of the organ banking was revealed. The severe bank crises Japan experienced during the 1920s indicated incompatibility of the organ banking with industrialization at the later stages. The government promoted the policy of restructuring the banking, based on the Bank Law of 1927. The policy substantially decreased banks' capital and their capacity of credit supply. The statistical analysis attempted in this paper shows that the decrease in banks' capital did not substantially hinder industrial growth in Japan as a whole, but that it was damaging to the regions where the light industries were relatively important.

Can we say that Japan's industrialization was promoted by the bank-centered financial system in the earlier twentieth century? In our view, we cannot say so. The organ banking was led by either industrialists or merchant who sought for effective methods to avoid various agency problems at the beginning of industrialization. Under organ banking, the banks did not monitor or control borrowers' management. The reverse was the case; the enterprises controlled banks' management. The demandable deposit was not utilized as an instrument to provide investors (particularly small investors) with highly liquid and safe stores of value, but to motivate investors to discipline banks' and industrial firms' managers. In a sense, the possibility of bank runs could be reconciled as a risk-based mechanism to discipline borrower firms for efficient management. More specifically, industrial firms could utilize the organ banking at the early stages of Japan's industrialization.

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Annexure: A chronology of bank runs and the public policy during 1890 - 1928

Year	Bank runs (BR)	Government policies
Dec1896	Runs on dozens of banks in Osaka.	The MOF ordered the provincial governors to strictly examine applications of establishing banks to prevent a flood of small banks. MOF announced that a new bank should have equity capital larger than ¥0.5 Million. MOF introduced capital adequacy requirements (a million yen for the region populated with more than 100 thousands for newly established banks, and recommended mergers between small banks.
Dec1900- May01	BR on banks in the Kyushu region, spreading all over the country.	
Aug1901		
May 1904	BR in Gifu Prefecture	
Feb-Mar 1907	BR in the Nagoya region, spreading to Tokyo, Oita, Saitama, Toyama, and Kanagawa.	
Nov 1907	Frequent BR on small banks, some of which closed business.	
Feb- Jul 1908	BR in various regions. 23 banks stopped business.	
Jun 1910		
Oct 1911		

Sharma Manish

Dec 1913	BR in Hiroshima Prefecture	
Apr 1914	Run on Kitahama Bank in Osaka. The bank stopped repayment of deposits in August 1914.	
Aug 1914	BR in the Nagoya region, spreading to all over the country.	
Mar 1916		The Bank Ordinance was amended to strengthen MoF's supervising power.
May 1918		MOF announced the minimum capital adequacy would be increased from ¥1.0 million to ¥2.0 million for cities with population of more than 100,000.
May 1920	BR in various regions and bank closures in Yokohama.	
Aug 1920		The Bank Ordinance was amended to make it easier for banks to merge with each other.
Apr 1921		Enactment of the Savings Bank Law, strengthening prudential regulations on savings banks.
Oct -Nov 1922	Bank holidays in Kyoto, Kumamoto, and other regions.	
Jul 1923	BR in the Chukyo region.	MOF ordered the provincial governors to promote bank mergers.
Jul 1924		MOF ordered ordinary banks sound businesses.
Aug 1924		MOF ordered the provincial governors to promote mergers of regional banks, and ordered banks to decrease dividend payout.
Apr-Jun 1925	BR in Tokyo, spreading all over the country. Almost all banks became targets of runs.	The Bank Act was announced (March 1927).
Mar-Apr 1927		
Jan 1928	On April 21 st , the government proclaimed the three weeks moratorium of banks and put it into effect.	The Bank Act was put into effect.

Sources: Bank of Japan (1991), and Ishikawa and Ishida (1981)

CHOICE OF COMPOSITE INDEX OR INDIVIDUAL MECHANISMS FOR CORPORATE GOVERNANCE STUDIES

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ABSTRACT

There is a wide body of existing literature that measures the association of corporate governance with firm performance which has reformed accounting education. These studies aim at improving the corporate governance practices, accounting education and act as a value addition to the regulatory bodies. Researchers can choose either individual, corporate governance mechanism or corporate governance index as independent variables having their own unique advantages and disadvantages. The purpose of this paper is to give clarity on the decision of independent variables while undertaking further studies on the relationship of corporate governance with firm performance. There can be different results for the same country due to the choice of sample, data collection period, statistical tools, changes in the economy or changes in regulations. This paper is unique to provide direction for future research on the decision of independent variables in corporate governance that could be addressed as part of accounting education.

Key Words: Corporate governance, firm performance, corporate governance index, board of directors, ownership structure, audit committee

INTRODUCTION

Several authors have investigated the impact of corporate governance on performance of financial and or non-financial companies in different countries (Al-Matari et al. 2012; Arouri et al. 2011; Pathan et al., 2008; Erhardt et. al. 2003). These types of investigations create a strong base to continue improving corporate governance practices, updating accounting education and encourage implementation by companies or regulatory bodies. A researcher can take two approaches in selecting the independent variable

which is either a single corporate governance mechanism or the construction of corporate governance index.

Existing research is a source of direction for all future prospective studies. It is important that gaps are identified as theoretical, contextual, empirical and or methodological to justify the need of study. When an initial study is being undertaken that has not been explored before there is either an introduction or investigation of a theory. For example, agency theory was introduced by Smith (1776) and Berle and Means (1932) which was further expounded by Alchian and Demsetz (1972) and Jensen and Meckling (1976). According to agency theory there is a separation of ownership and control that leads to potential conflict of interest. The interests of the management and owners can be aligned by various internal and external corporate governance mechanisms (Fama, 1980; Shleifer And Vishny, 1997). This premise led to authors investigating the impact of corporate governance mechanisms on firm performance from the perspective of agency theory (Munisi and Randøy, 2013; Rosenstein and Wyatt, 1990; Subrahmanyam et al. 1997). Similarly various theories such as stewardship theory, stakeholder theory or institutional theory has been used as a basis to carry out investigation.

A contextual gap is an important stimulus in the corporate governance studies. Mashayekhi and Bazaz (2008) investigated the impact of corporate governance on firm performance in Iran as this was a developing country where such studies have not been previously conducted. Black et al. (2012) chose Brazil for corporate governance study as the existing literature in this area was limited to research for the same country by Carvalha Da Silva and Leal (2005) and Leal and Carvalhal da Silva (2005).

Studies can also be initiated by a methodological gap that is identified due to the sample selection, variables or statistical tools used in the existing literature. Kang and Kim (2012) studied the impact of ownership structure on firm performance for state owned enterprises (SOE) in China. There were already existing studies that focused on ownership structure in China (Delios and Wu, 2005; XU and Wang, 1999). Kang and Kim (2012) differentiated their study by using an alternative classification scheme for SOE ownership that laid emphasis on ultimate owner rather than legal owner. Ozkan (2011) examined the association of CEO compensation with firm performance of UK non-financial firms for the period 1999 to 2005. The author suggests that this research was unique as both cash and equity based compensation would be used in the analysis. Earlier studies in UK were conducted by Gregg et al. (2005) for relationship between cash compensation and firm performance of the period 1994 to 2002. This was a different period than the study proposed by Ozkan (2011). Other studies used only one year of study. So Ozkan (2011) could justify the need for research due to methodological gaps. An important motivation for future studies can be greatly affected by the choice of variables in the corporate governance literature and this research highlights how decisions can be undertaken. This paper has two aims: firstly to examine the various

outcomes that have been derived in the existing literature using a mechanism or index as a variable; secondly, to make suggestions on the choice of independent variables for a study on corporate governance impact on firm performance. Overall, this would lead to contributions in accounting education.

The following sections of this paper are organized as follows: Section 2 discusses the existing literature that has investigated the relationship between individual corporate governance mechanisms and firm performance. Section 3 outlines the existing literature on the relationship between corporate governance index and firm performance. Section 4 presents a tabular view of different studies in sample countries and Section 5 provides discussion and conclusion.

EXISTING LITERATURE USING INDIVIDUAL CORPORATE GOVERNANCE MECHANISM

The existing literature has contributed to corporate governance by taking individual practices as independent variables. These are widely advocated in accounting education across different curriculum. The most prominent internal variables that are studied include ownership structure; board of director's and audit committee characteristics. These have been proved to have a positive, negative or no relationship with firm performance.

a) Ownership structure/Ownership composition

Ownership structure has been widely investigated in different studies as a corporate governance practice. Agency theory propagates that higher percentage ownership is a mechanism to establish board effectiveness (Yen et. al., 2007).Grossman and Hart (1980) takes the agency theory perspective to suggest that institutional investors are effective in monitoring an organisation. Shleifer and Vishny (1997) further suggests that ownership concentration is a good corporate governance practice. As an important outcome of agency theory, many studies investigated the relationship of ownership structure with firm performance. For example, Alipour (2013) investigated the impact of ownership structure on the firm performance using 2-SLS regression for 60 listed companies on the Tehran Stock Exchange from 2005 to 2009. Ownership concentration was split into five independent variables: state, firm, individual, family and institutional ownership percentages. It was found that concentrated ownership has a positive relationship with return on equity (ROE) whereas an inverse relationship is found with return on assets (ROA) and Tobin Q. State, individual and family ownership had a negative relationship with firm performance however firm and institutional ownership were positively related to performance. In comparison, the earliest study by Berle and Means (1932) found a negative relationship between the dispersion of shareholders and performance. Seifert et al. (2005) conducted studies for firms in the United States, United Kingdom, Germany and Japan. They showed that insider, institutions or block holder ownership impact on firm performance varied across the countries for reasons attributed to local laws and business environment.

Laeven and Levine (2008) found a negative relationship between blockholder ownership and Tobin Q for 13 countries in Western Europe. Ahmed et. al. (2012) argued concentrated ownership in listed firms of Pakistan were negatively related to the share price growth but positively related to ROA and sales growth. Fauzi and Locke (2012) results revealed that managerial ownership had a positive whereas blockholder ownership had a negative relationship on firm performance. Kumar and Singh (2013) studied a new variable of promoter ownership in India and its relationship with firm performance was positive. Ownership structure has taken the forms of concentrated/block holder, institutional, family, managers, state, promoter and bank ownership. Studies are motivated by the prominence of a structure in the country.

b) Board of Directors characteristics

Board of Directors (BoD) experience, composition, structure and other features all have been measured as a corporate governance practice that increases effectiveness in the control of corporations. It is suggested by agency theory that majority of the board members should be outsiders and independent, the same person should not represent as the Chairman and CEO, and adequate board size (Cadbury Report, 1992; Jensen, 1993). Consistent with these recommendations, studies were conducted to understand the impact of Board of Directors characteristics on the firm performance.

c) BoD composition

Baysinger and Butler (1985) investigated 266 corporations in the US and concluded that an increase in the independent directors does not improve the firm performance. Kaplan and Reishus (1990) argued that outside directors and performance had a weaker relationship in US firms. A mix of results was found for developing countries. In Thailand, a positive relationship was found between board independence and firm performance (Pathan et. al. 2008). In Srilanka, the proportion of non executive directors had a negative relation with financial performance (Guo and Kumara, 2012). Similarly a negative relation was found in Jordan (Bino and Tomar, 2012) and Ghana (Kyereboah-Coleman and Biekpe, 2006).

d) BoD Size

Empirical researches have identified certain advantages and disadvantages of having a large board size. Such as Jensen (1993) suggested that there is an increase in conflicts due to the number of board members, whereas Pearce and Zahra (1992) found that a large board size can enhance corporation's control capacity and performance. As board size is an important component of corporate governance several researchers investigate its association with firm performance.

Kumar and Singh (2013) analyzed the corporate governance structure for 176 listed firms in India and found that board size is negatively related to the firm value consistent with the studies of Kota and Tomar (2010). In contrast, studies by Dwivedi and Jain (2005) for

the period before 2005 concluded a negative relationship for India. Yermack (1996) and Eisenberg, et. al. (1998) suggested a negative relationship between board size and firm value observed for large US and Finnish firms respectively.

e) BoD Diversity

It is proposed that corporate diversity enhances better understanding of the work environment, initiates creativity and innovation, encourages problem solving, effective global leadership and global relationships (Robinson and Dechant, 1997). Board diversity has been measured in past in terms of percentage of women, or different ethnic groups or outsiders providing a representation. A study by Shrader et al. (1997) of a sample 200 Fortune 500 firms suggest that there is a positive relationship between women in managerial position and firm value represented by ROA and ROE. Erhardt et al. (2003) used data of 112 large US public companies and found that executive board of director diversity had a positive relationship with return on investment and return on assets. Carter et. al. (2003) also found a positive relationship between the fraction of women or minorities on the board and firm value while examining Fortune 1000 firms. Fauzi and Locke (2012) extended board diversity study in New Zealand and found that a higher proportion of female directors decreased firm performance.

f) CEO duality

Agency theory propagates reduction of agency costs and improvement of firm performance by the separation of management and control decision making (Jensen and Meckling, 1976). It is advocated by most regulations (Cadbury Report, 1992; Hampel, 1998) that the roles of Chairman and CEO should be separate.

Within the recommended contexts by agency theories and regulations, studies were undertaken to measure impact of CEO duality on firm performance. Guo And Kumara (2012) found an insignificant relationship with CEO duality and firm performance of non financial Sri Lankan firms. This result was consistent with the results of Al-Shammari and Al-Sultan (2010) in Kuwait, Arouri et al. (2011) in GCC countries, Boyd (1995), Daily and Dalton (1992). Kiel & Nicholson (2003) investigated impact of board characteristics on firm performance of Australian listed companies. In relation to Tobin Q a better relationship was found with CEO duality. Sanda et. al. (2005) argued through their research in Nigeria, a positive relationship was found with firm performance when there was separation in the roles of CEO and Chairman.

g) Audit Committee Characteristics

Audit committees are an important component of the organizational structure that helps reduce the incentive problem, increase the credibility of financial statements and assisting the board of directors to protect the stakeholder interests (Collier, 1992; Fama and Jensen, 1983).

i. Audit Committee Composition

The study of a sample Fortune 200 companies it was concluded that proportion of independent audit committee members had a positive relationship with Tobin Q (Chan and Li, 2008). Ilona (2008) also found a positive relationship with ROA for Indonesian firms. For the same independent variable, Al-Matari et al. (2012) saw no significant relationship with firm performance for Saudi Arabian Listed companies.

ii. Audit Committee Size

A sample of US firms showed a negative correlation between the size of the audit committee and profitability (Yermack, 1996). Followed up with the studies by Eisenberg et al. (1998), small audit committee size shows an increase in the value of small and midsize Finnish firms. Further studies were extended to Malaysia and Singapore companies and it was found that small committee size is positively related to better firm value. Kyereboah-Coleman (2007) found a positive relationship for the Sub African countries audit size and firm performance indicators Tobin Q and ROA.

iii. Audit Committee Meetings

It is suggested that for audit committee to effectively execute its responsibilities in a firm it is not sufficient that they are only composed with independent members but must also be active in the organisation (Menon and William, 1994). Kyereboah-Coleman (2007) studied a sample of 103 firms drawn from Ghana, South Africa, Nigeria and Kenya for a five year period of 1997-2001. The results of the study indicated a positive relationship between audit committee meetings and Tobin Q and no relationship with ROA. Country specific results showed a negative relationship between frequency of audit meeting and ROA for Ghana.

EXISTING LITERATURE USING CORPORATE GOVERNANCE INDEX VARIABLE

An alternative approach used by different authors is to construct a comprehensive corporate governance index and measure its impact on firm performance (Munisiand Randy, 2013; Brown and Caylor, 2006; Gompers et al. 2003). It is interesting to note that corporate governance index has been developed for a particular study using any of the three approaches: a) adoption of corporate governance index constructed by external agencies, b) index created after deriving results from an administered survey, or c) index which is developed after the analysis of corporate governance code and annual reports. For example, Gompers et al. (2003) adopted the Investor Responsibility Research Centre (IRRC) governance index based on anti –takeover provisions. Black et al. (2012) circulated a survey to the listed firms on Brazilian Stock Exchange Bovespa in 2005 and based on the results developed Brazil Corporate Governance Index. Leal and Carvalhal da Silva (2005) were not survey based but answered from public information disclosed by listed companies in Brazil.

This section summarizes the existing literature results on corporate governance index as an independent variable. A corporate governance index was developed for Sub-Saharan African companies and data were collected for a period of 5 years from 2005 to 2009. It

was found that the index had a positive relationship with accounting performance and a negative relationship with market value. The sub-indices of the Board of Directors and Audit Committee demonstrated a significant positive relationship with accounting performance. The audit committee had a negative relationship with market valuation (Munisi and Randy, 2013).

A study by Black et al. (2012) reflected 41 firm attributes in the Brazilian corporate governance index. Data was collected for 2004 and it was found that ownership structure, board procedure, and minority shareholder rights predict higher lagged Tobin Q. Lower Tobin Q was predicted by greater board independence.

Sami et al. (2011) measured the associate of corporate governance index (GOV-SCR) with the accounting and market based measures for listed firms in China. A positive relationship was found in the data collected from 2001 to 2004. Prior studies in China were conducted by Cheung et al. (2008) that constructed the corporate governance index based on OECD principles of corporate governance. This study found no association between corporate governance index and its market valuation.

Black et al. (2006) studied the association of Korean Corporate Governance Index (KCGI) with a market value of public companies. KCGI was constructed on the basis of a 2001 survey administered to 515 Korean companies. The result suggested no strong evidence that better governed firms have more profitability or pay higher dividends.

Carvalho Da Silva and Leal (2005) investigated the relationship of quality of corporate governance practices for Brazilian listed companies by using a broad firm specific corporate governance and performance. The results suggest that only 4 percent of Brazilian firms had good corporate governance practices and there was a higher performance for firms with better corporate governance. A positive relationship is found with market based measure of Tobin Q and better corporate governance practices.

Klapper and Love (2004) have been cited by several authors for their focus on corporate governance practices in emerging countries. The research use a governance index which was a sum of management discipline, transparency, independence, accountability, responsibility and fairness. The overall conclusion suggested that better corporate governance has a high correlation with better operating performance and market valuation.

Gompers et al. (2003) use a firm level governance index (G-Index) that indicates poor governance indicating lower valuations but not necessarily lower operating performance. Core et al. (2006) study concluded results that were not consistent with Gompers et al. (2003), weak shareholder rights were associated with significant operating underperformance.

The above few studies exhibit the approach in different countries and results derived to support the evolvement of corporate governance.

1. Comparative studies on corporate governance with individual mechanism or index approach

A summary table 1 is presented reflecting selected papers measuring association of corporate governance and firm performance in various countries. For instance, studies have been made on corporate governance for Korea either by use of individual corporate governance mechanism (Choi et al, 2012; Kim, 2007; Joh, 2003) or by using corporate governance index (Black et al. 2006). On comparison, all studies have data collected for different periods and variables.

Studies in Iran have either taken corporate governance index or individual mechanisms as independent variables. Mehrabani and Dadgar (2013) collects data for a ten year period 2001 to 2010 and concludes that corporate governance index has a positive association with firm performance indicators. In comparison, Alipour (2013) investigated only the ownership structure of Iranian firms. Concentrated ownership showed mixed results on different dependent variables, positively related to ROE and negatively to ROA.

The corporate governance index developed for Indian companies showed a positive relationship with different firm performance variables across few studies (Varshney et al. 2012; Balasubramanian et. al., 2010; Mohanty, 2004). Kumar and Singh (2013) showed a negative association between board size and Tobin Q whereas Jackling and Shireenjit (2009) had a positive association between large board size and firm performance.

Research either shows consistency or a deviation in results for the same country. Though not all studies have been included there will always be a scope for further research by investigating a different sample, or period or variables.

Table: Summarized Outcomes of Past Research Work

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
Korea	Black et al	2006	Panel data with firm fixed effects	Korean Corporate Governance Index Subindices: Board Structure, Ownership Parity, Disclosure, Board Procedure, Shareholder Rights	1998-2004	Firms with high KCGI score have higher Tobin Q. The Board structure subindices strongly drive the result. Ownership parity and disclosure subindices drive the overall result less strongly.
Korea	Joh	2003	Cross sectional , time series country analysis	Ownership Structure	1993-1997	Low ownership concentration show low firm profitability
Korea	Choi et al.,	2012	Panel Regression, OLS, 3SLS	Foreign investors and foreign outside directors	2004-2007	Both variables are positively related to firm value.
Korea	Kim	2007	GLS	Proportion of outside directors to total directors and outside directors social capital	1998-2008	There is a positive relationship between outside director social capital and Tobin Q
Iran	Mehrabani and Dadgar	2013	Correlation and regression analysis	Corporate governance index	2001-2010	Corporate governance indices have a positive relationship with firm

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
						performance (ROA, ROE, Stock return, Tobin Q)
Iran	Mashayekhi and Bazaz	2008	OLS	Board size, proportion of independent directors on the board, CEO duality, proportion of board members who are institutional investors	2005-2006	Board size and high percentage of outside directors has a negative relationship with firm performance. Outside directors have a positive relationship with firm performance. Duality has no significant negative impact on firm performance.
Iran	Alipour	2013	Panel data regression analysis, 2SLS	Ownership concentration	2005-2009	Ownership concentration is positively related to ROE and negatively related to ROA. State, family and individual ownership are negatively related to performance. Firm and institutional ownership are positively

CHOICE OF COMPOSITE INDEX OR INDIVIDUAL MECHANISMS FOR CORPORATE GOVERNANCE STUDIES

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
						related to performance.
China	Sami et al.	2011	Common factor analysis	Single dimension measure (ownership concentration and board independence) and Composite corporate governance measure (GOV-SCR)	2001-2004	Single dimensions have a positive impact on firm performance and valuation. Foreign ownership have higher firm value whereas high state ownership have a lower firm performance. GOV-SCR is positively and significantly related to firm performance and valuation
China	Lin et. al	2009	3SLS	Bank ownership	1994-2004	Bank ownership hurts corporate performance
India	Varshney et al.	2012	ANOVA analysis	Corporate governance index	2002-03 2008-09	There is positive correlation between Corporate governance index and VA.
India	Mohanty	2004	Simultaneous equation	Corporate governance	2001	Better governance

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
				index		index scores generated higher returns measured by Tobin Q and excess stock returns
India	Balasubramanian et. al.	2010	OLS	Indian Corporate governance index	2006	Corporate governance index and firm market value are found to have a positive relationship
India	Jackling and Shireenjit	2009	3SLS	Board structure	2005-2006	Greater proportion of outside directors is associated with improved firm performance. Large board size has positive impact on firm performance
India	Kumar and Singh	2013	Regression analysis	Board size and promoter ownership	2008-2009	Board size and Tobin Q have a negative association. Positive relationship between promoter ownership with Tobin Q.

CHOICE OF COMPOSITE INDEX OR INDIVIDUAL MECHANISMS FOR CORPORATE GOVERNANCE STUDIES

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
Brazil	Black et al.	2012	Fixed random effects regression	Corporate governance index	2004	Overall index and the subindices of ownership structure, board procedure and minority shareholder rights are useful in predicting higher lagged Tobin Q.
Brazil	Carvalha Da Silva and Leal	2005	Panel data regression	Corporate governance index	1998-2002	Less than 4% of the firms present good corporate governance practices. It is found that firms with good corporate governance have slightly higher performance (ROA). A positive relationship is found between Tobin Q and corporate governance practices but statistically insignificant.
Russia	Judge et al.	2003	Regression Analysis	Board Structure	2002	Negative relationship with CEO

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
						duality and firm performance. The more vigorously the firm pursues retrenchment policy the more negative the relationship between proportion of inside directors and firm performance.
Russia	Black et. al.	2006	OLS and Fixed index fixed effects regression	Corporate governance indices	1999-2003	Statistically strong correlation between governance and market value.
Japan	Bauer et. al.	2008	Time series regression	Corporate governance index	1999-2004 2000-2004 2001-2004	Better governed firms significantly outperformed poorly governed firms. Financial disclosure and internal controls, shareholder rights, and remuneration subindices have a

CHOICE OF COMPOSITE INDEX OR INDIVIDUAL MECHANISMS FOR CORPORATE GOVERNANCE STUDIES

Country	Authors	Year	Research Methodology	Independent Variables	Firms investigated	Outcome
						significant impact on stock performance. Board accountability, market for control and corporate behavior have no effect on stock performance.
Japan	Sueyoshi et al.	2010	Data Envelopment Analysis (DEA) And Tobit Regression	Stable shareholding Foreign shareholding	1999-2006	It is found that stable shareholding increases operating performance if the percentage of shares held exceeds 61.21%. Foreign shareholding held within 19.49% improved the operating performance.

DISCUSSION AND CONCLUSION

In an attempt to keep the economy running smoothly and productively, regulators play an important proactive role. The circular flow of creating and providing resources needs to be managed with utmost care. Corporations play a supporting role to this process. Since the nature of the companies has separation of ownership and management it becomes imperative that there are mechanisms that encourage ethical practices with an aim to align the interests. The corporate governance mechanisms are recommended as laws by the regulatory bodies that are mostly applicable to listed companies. Companies

which operate privately such as family owned may not necessarily be applying the corporate governance seriously. Most of the corporate governance literature has investigated samples that are listed companies. As long as the listed companies make up a higher percentage of the economy the results of such studies can be considered as conclusive enough. This is an area that can be productively explored in the future research.

Corporate governance is not a static practice but ever evolving. The dynamics of a country determine the prominent nature of organizations. For example in the emerging nations, state owned enterprises may be more dominant. There might be countries that allow foreign ownership or restrict it. Regulatory bodies may issue laws that might restrict the size and proportion of board of directors. Any research that is planned for a specific region needs to understand the inherent characteristics of that economy. If the ownership structure is investigated with a view to find the impact of government ownership in a more privatized economy it may not result in a meaningful study.

As a sign of assurance, studies have been made to find an association between corporate governance and firm performance. The investigation can be either in terms of individual mechanisms or as a composite index. Individual corporate governance mechanisms or composite index are never presented as standalone independent variables. The control variables are always examined along with the independent variables. Firm size, sales growth, proportion of fixed assets to total assets, leverage and many more control variables affect the organization performance. It is a recommended practice to continue future research with control variables that affect the firm performance.

In an event that a region has had a wealth of corporate governance studies it may not necessarily have the same conditions in the economy or similar rules and regulations. For example, the developed countries have been surveyed extensively for corporate governance but when the global financial crisis occurred in 2007 many of them were affected. This gave opportunities for researchers to investigate the developed countries again on the role of corporate governance coming to that period. Many new developments took place on the corporate governance practices since the crisis period therefore future research can be invited to measure the association again from 2007 till today.

When a single corporate governance mechanism is being investigated an overall recommendation can be suggested for its development alone. The statistical tools used for its measurement or the sample selection will always have few limitations that cannot always be overcome.

A corporate governance index as a composite measure is either adopted or constructed. The index gives an overall compliance level of sample firms. It is usually suggested that

corporate governance is not an individual mechanism but a combination of practices. Studies can also be made on the relationship of sub-indices with firm performance. The limitations on multifactor indexes include problems related to its measurement, endogeneity or substitution effect (Bozec and Bozec, 2012).

This paper has summarized only few papers with an intention to broaden the horizon of future researchers. Any approach used would have its own justification and limitations. This needs to be addressed in order to continue making useful contributions to studies that measure the association of corporate governance with firm performance. A literature review paper on the limitation of different studies and firm performance indicators can be a future pathway for research.

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ACCOUNTING EDUCATION IN INDIA IN CHANGING PERSPECTIVES

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ABSTRACT

The author, based on his life-long experience in accounting education and research in India and abroad, sketches some of the important changing perspectives and challenges confronting the commerce/accounting education and research in the country and suggests measures for improvement in the scenario for 'developing global-minded academics'.

Key Words: Changing Perspectives, Challenges, Integration, Accounting research

INTRODUCTION

Any meaningful discussion on accounting education should reasonably cover three of its inter-linked components – Education, Research and the Practice. What is the justification of integrating teaching and research, research and practice, practice and teaching and vice-versa? Research is viewed as the primary means by which academics in a discipline can enhance and update their knowledge. It promotes learning continuously. This helps both in teaching and designing contents of new courses. Some researches may be undertaken to solve industry problems or for framing theories based on existing practices (examples, development of depreciation accounting, corporate reporting framework, balance score card, etc.). So, these components are inter-related and complimentary to each other.

The American Accounting Association (AAA) and The American Institute of Certified Public Accountants (AICPA) had set up a Commission (www.pathwayscommission.org) to study the future structure of higher education for the accounting profession and to engage and retain the strongest possible community of students, academics, practioners, and other knowledge leaders in the practice and study of accounting. The (Pathways) Commission in its recommendations (2012) added one more component i.e. Public Interest. This includes (1) Non-profits Organizations, (2) Government Entities, (3) Special Interest Groups, (4) National Agencies, (5) Grant Agencies, (6) Policy Makers and (7) General Public.

This paper, however, briefly deals with only two of the components, namely, Education and Research, for constraint of volume. The remainder of the paper is accordingly organised as follows. Section 2 deals with changing perspectives in the coming years/decades. Then the objective and agenda are set in section 3. This is followed by a very brief reference to the challenges (problems) we have been facing in the accounting education system. In section 5, an attempt is made to identify some of the issues concerning accounting research and briefly discuss them. The last section contains concluding observations.

Changing perspectives

There are many factors that influence the development of accounting education and research in a country. Notable among them are:

- Economic
- Environmental
- Regulatory, and
- Technological

India is now the 4th largest economy in the world – after the USA, Peoples Republic of China and Japan. In 2020, India is likely to be 3rd largest economy in the world, after PRC and the USA (*source: blog.10.euromonitor.com*). Similarly, accounting profession in India is the 2nd largest in the world, after that in the USA but before those in the U.K. and Australia, with 2,16,459 members as on 01.04.2013 (about 44% in practice and 56% in service). Against the above, the news in the education front is unsatisfactory. It was revealed in a US survey that Indian universities are far from the ranking of top universities in the world (The Times of India, October 30, 2014, p.12).

On the economic front, India is seen an emerging economy, with the increase in economic growth and increasing middle class domain public. This was analysed, that, this would enhance environment for with the increased global consumption, investment (Dobbs, 2010).

But this calls for, giving importance to education system, as a building block. Furthermore, increasing investment, consumption, would enhance exploitation of resources, necessitating the concept of ‘sustainable development’. The next decade will see an increased focus on resource productivity, the emergence of substantial clean-tech industries, and regulatory initiatives” (Bison et al, 2010).

The rules of the new economic terrain that may restrict companies may become a major concern among executive decision-makers. Ernst & Young identified regulatory risk as the top business risk in 2010 in its Annual Survey of Global Executives. An uncertain regulatory environment throughout much of the world may prevail for many reasons. As for example, in India for mergers and de-mergers etc. prior clearance from the SEBI over and above compliance with other regulatory provisions has now become a reality.

Another example may be last the Finance Act to recover tax retrospectively in the Vodafone case although the judicial scrutiny in the matter is not favorable.

Thus, proposal for extensive changes in the regulatory regime governing capital markets in India and other countries are glorious uncertainties in the upcoming regulatory environment. Should we not understand better business risks and operational risks and not just “control risks”? Over time, investing public and the regulators will demand that our profession gives an opinion on business risks. This calls for questioning the changes in education system required.

Regarding technology, there has been explosion of use of internet services, mobile devices like smart phones and tablets. Millions of consumers are increasingly taking decisions on online. Businesses that do not wake up to this, run the risk of becoming irrelevant sooner than later (*The Economic Times*, 2013).

Change in technology has tremendous impact on education, training and research systems in the higher education. Let us address two issues in this context. The development of Massively Open Online Courses (MOOCs) in the United States has been changing the landscape of education. While this was an innovation started by some entrepreneurs in the Silicon Valley and some venture capitalists, today mainstream universities like Harvard, MIT, Princeton, Michigan, Columbia, Cornell, etc. have all introduced MOOCs on a diverse range of subjects. IIT-Bombay is the first in India which is about to introduce MOOCs.

What will we do in the changing technological environment? How are we going to be affected in the present set up? It cannot be denied that, one day, the formal class room in the *educational institute of the future* will disappear. The only kind of classroom one will have where the teacher is replaced by a video monitor. The local instructor will be there to simply co-ordinate the lecture sessions. There are several issues that need further research. For example, how effective are these techniques in learning various subject-matters? Could there be different levels of learning for different subject matter? It is definitely advantageous to use IT to reach students in remote areas. A recent study on higher education in India by the UK-India Education Research Initiative predicts an exclusive growth in the number of students enrolling for higher education, that is, by 2022, the estimated figure is likely to reach 40 millions. It is also mentioned that a very large number will be from rural and semi-urban areas (Chatterji, 2014).

To cope with the above upcoming developments, there will be many challenges e.g. infrastructure building, IT support, attitude of the teachers to go for a change, etc. which need to be addressed properly. So, we must bring about structural changes in higher education.

The Agenda

In order to play our role, whether as an academic, professional or an administrator, we need to:

- Identify the drivers of change in the years to come and assess their impact on our education system to bring about necessary reforms to enhance our competitive advantage.
- Assess the existing problems/challenges to overcome their impact on the system to make it vibrant and effective.
- Fix our roles to help creating values to the students in real sense. Making our education system more useful to other stakeholders will also be our motto.

Let us therefore put one of the important objectives of the education system in a more concrete term as follows:

Developing Global-minded academics: This helps in operating and collaborating effectively in a global economy requires a mind-set that transcends geographic and cultural boundaries.

THE PRESENT CHALLENGES (PROBLEMS)

Now, let there be a brief discussion of *some* of the existing challenges (problems) because unless we can have a feasible solution of them, our higher education system will not improve to the extent desirable.

1. Giving Accounting the status of a separate discipline: The universities in India are still carrying on the British legacy of Commerce Departments with Accountancy as one of the specializations/streams. Except a few universities in the State of Rajasthan, accounting has not been given the status of a separate discipline in most universities in India. The UGC, the central policy making body, does not also recognize Accounting as a separate discipline. Consequently, all degrees awarded for studies in Accounting (including higher research degrees) are given under Commerce or Business Management. What is the impact of this trend? Accounting, in spite of its importance, does not grow that much in keeping with the societal needs and in many cases curriculum framed is traditional and directionless. Consequently, the products of the system do not get good response from the market.

It may be mentioned here that in the USA, Japan, Australia, Canada, and in many EU countries, Accounting is given a status of separate discipline. In many South African countries, which were once a British colony like India, Accounting is now recognized as a separate discipline and degrees in under-graduate and graduate courses (including research degrees) are given accordingly.

It may not be inappropriate to take an example of one of the oldest and premier universities in India. In the University of Calcutta, the Department of Commerce was under the Economic Department for decades. In early 1960s, it was separated from the Economic Department and, in mid-1980s; its MBA course was also separated from Commerce. The present M.Com course of this University is heavily dominated by

Accountancy Group of papers. The results are quite convincing: there has been spectacular growth in both the MBA and the Commerce Departments. The Department of Commerce of this University is the first Department in India, among all commerce and management departments, which got the status of Centre of Advance Studies (CAS) from the UGC in 2010 under the leadership of the present author. Similar examples are not difficult to find elsewhere.

Thus, it can be asserted that Accounting should be accorded the status of a separate discipline under the auspices of the School of Business at the post-graduate level. Now that accounting has transformed from “stewardship” function to ‘accounting as an information system’, there are various stakeholders who would be interested in accounting information and hence there will be more and more demand for accounting information in the changed perspectives.

2. Co-ordination between lower and higher degrees: Till now there is no meaningful co-ordination between the curriculum framed at the higher secondary level and that framed at the under-graduate and graduate levels. A better co-ordination is desirable to avoid duplication of efforts and wastage of time. Presumably, due to lack of well-defined objectives and proper co-ordination at various stages, the commerce education in India does not command its due respect from trade and industry. The curricula up to graduate level should be drawn in such a way that it partly meets the requirements of the professional institutions and partly the requirements of higher education in that those who will come out successful at the under-graduate level may either pursue higher education or may shift for professional courses. Also the curricula should give more emphasis on conceptual and research aspects rather than promoting only computational skills.

Commerce, especially the accounting programmes at the university level, should stop playing second fiddle to those of professional institutions in order to justify their existence and growth. Accordingly, course structure and contents should be redesigned to expose the students to the conceptual foundation of accounting subjects, research methodology and contemporary national and international issues.

3. Teaching methodologies: Methodologies should be such that they help in grasping knowledge easily. Thus, the mode of instruction should be directed toward the infusion of conceptual, technical and computational skills in the students. While the procedural aspects of dwelling on the question of ‘how’ should not be lost sight of, a greater emphasis should be placed on the rational aspects of ‘why’ and ‘what’ ought to be. This approach to learning will further develop the skills of the accounting students to meet the changing needs of the society. Secondly, with regard to the teaching aids, display of visual aids, like power point and audio-visual presentation, etc., case study method, group discussions, debates, workshops and seminars should be followed. The case study approach should bring the class room exercise closer to reality. Participation in seminars

and workshops will help the students to think independently and express their ideas freely. This will build up confidence among the students and enhance communication skill.

A deliberate plan of how to perform the teaching functions could contribute to teaching effectiveness. The learning process in a course can thus be facilitated in *course planning* which is very much lacking in most of the universities in India barring a few exceptions. There should therefore be proper course planning for accounting education right from the under-graduate level.

4. Performance evaluation: Performance of teachers should be evaluated by students on a multiple scale. The present one-way system of teaching should be discontinued and teachers' performance should not be taken 'sacrosanct'. The evaluation should rest heavily on the clear and consistent use of criteria, which in turn, should stem from the clarity with which the educational institution's planned objectives are stated. Initially, in order to inculcate this culture, prizes may be given for "best teaching" and "best research". When a healthy practice is developed, evaluation may be given some weight for career advancement or promotion of teachers.

5. Co-ordination with professional bodies: The accounting academics are groomed in the university system and the professional accountants are groomed by the professional institutes. In the USA, the teaching of CPAs is mainly left to the university system while the AICPA conducts CPA examinations and gives practical training. India and many other countries follow a different model in that both teaching and conducting examinations are performed by the institutes. In the university system, there is no scope for practical training. All these make difference in curricula, method of teaching and training and consequently *difference in attitude* among the products of these groups. Is not a better co-ordination between accounting academics and professional accountants desirable for the healthy growth of both the professions and for optimising the use of scarce national resources?

Academic and professional accountants should join together in grooming more effectively the two streams of accountants. The systems should be made complimentary to each other for their own benefits and for serving better the cause of national and international requirements. How can this be achieved? The process should start with interactions in framing curriculum, hiring professionals to share their experience with the students in the university system. Similarly, academics may play an important role in sharing their knowledge of conceptual foundations of accounting and good research findings with the professional students. Co-ordination may also be extended for jointly organising seminars, conferences, workshops and building cases and undertaking projects.

6. Academic administration: The effectiveness of the education system depends on how efficiently and impartially it is administered. A university represents a unique structure where an ideal synthesis of technology, humanism, autonomy, accountability, initiative and regulation becomes a requisite for its sustenance and growth.

The university administration should not follow a pyramid structure but it should be as flat as possible and create a synthesis between centralisation and decentralisation (Arora and Sogani, 1994). The role of the academics in the administration should tend to increase and committees should become legitimate channels of participation. The functioning of Departmental Committees, at the instance of the UGC, has become effective in recent years in most cases. The Gajendragadkar Committee on higher education had suggested that “the academic and administrative wings of the university must work in a spirit of co-operation and understanding. A human touch must be present in all the sub-systems of the university”.

Strengthening Research Activities

Research in any discipline, whether fundamental or applied, serves as the ‘open sesame’ to the advancement of the horizons of any education system. Research in accounting cannot be an exception to this. But still accounting is a new discipline compared to economics and other social sciences. Admittedly, we find a lot of differences between the quantity and quality of research done in commerce and those in other social science departments. To enhance the academic respectability among other academics of social science departments in the university system, we have to bring about many changes in our research activities. The more important questions are why and how?

It is important to recognize, in this context, the role played by the University Grants Commission in promoting minor and major research in all disciplines including commerce. The DSA and DRS Programmes granted to various universities in the country lead to strengthening collective research in the Department participating in such programmes. Grant released for national and international seminars is another step in the right direction. So, the research environment has improved considerably in recent years. In spite of these developments, there are many issues for interactions:

- What is the trend of research in accounting and finance?
- What are the elements of research?
- Why is research being done at all? Is it only for career advancement?
- What should be the direction of research?
- How can we improve the quantity and quality of research?
- How to measure quality?

Many more similar relevant questions may be raised for a discussion.

An analysis of researches done (research-based articles, Ph.Ds, and research volumes, etc.) indicates the following stages of developments in research in accounting and finance in India over the last four decades (Saeed, 1991; Banerjee, 1994):

- Stage I : Compilation type
- Stage II : Empirical type
- Stage III : Empirical and Conceptual type.

“The research base in Accounting is not very strong. Most researches in accounting are in the area of corporate reporting, accounting for specific needs/areas and accounting techniques. Empirical research is limited; Difficulty in obtaining appropriate data is often mentioned as a limitation in research reports. Strengthening research is necessary for the growth of the discipline” (Sharma, 2014).

The *purpose, elements and quality of research* may now be briefly addressed.

“... Research has its own intrinsic rewards, but it is not an end in itself. Society may reward researchers in the short-run because they possess a scarce resource, namely, the ability to initiate and complete a research effort. In the long-run, however, society expects more tangible results, and the value of research projects can, and should, ultimately be measured in terms of their contributions to understanding, problem-solving, reduction of uncertainty, and prediction of phenomena” (Khalik and Ajinkya, 1979; pp. 1-2).

The outcome of any particular research effort may be described as the product of the interaction of various elements of research (Banerjee, 2003), that is -

- an idea
- a researcher
- a method, and
- an environment

The quality of research idea depends on the quality of the researcher and the quality of the researcher is heavily influenced by his or her training and academic environment. G. D. Roy, a seminal research scholar in accounting, was concerned with the ‘loss of academic respectability’ of accounting academics in view of the prevailing state of research in accounting in India (Roy, 1991). As a remedy, he suggested that “teachers of accounting and allied disciplines should be careful in the selection of research topics either for the purpose of their own or of their students ... It is better that the said selection of research topics is made from **conceptual and theoretical topics**. Otherwise, the ‘academic respectability’ of the discipline concerned cannot, possibly, be maintained among other disciplines of the university.”

A lot of things need to be done in improving the quality of the research work. Apart from selection of topic (elegance vs. relevance), it is imperative to bring about the improvement in the methodology of study, and contributions to existing body of

knowledge. It cannot be denied that the quality is a state of mind and has, therefore, to be very dear to the heart of the researcher. Otherwise, any effort or system may be beaten hands down. Some criteria may be suggested to measure and improve quality of research, namely:

- Researcher's own satisfaction
- Peer review
- Compliance with existing regulations, if any (particularly in respect of Ph.D. dissertation and project work)
- Publication, and

Post publication review and citations in other research works.

Again, let there be a few words on 'relevance' of research topics. In a developing country like India, education is heavily subsidized. It is therefore expected of an academic and researcher that he or she gives in return quality research outputs that may be useful not only to the education system and profession but also to the economy and the society at large. Also, a true professional must be committed to contribute to the cause of the economy and the society rather than to his own cause.

CONCLUDING OBSERVATIONS

What conclusion can be made on a subject who is contemporary, vibrant and living? Commerce/Accounting Education has improved tremendously in India over decades. Still, lot more things are yet to be achieved. Our journey to the "height of excellence" is no doubt full of challenges but we have to "overcome" them with our courage, confidence, dedication and sacrifice. It is heartening to note that more brilliant of the student population is now attracted to commerce/accounting education. I am thoroughly impressed by the quality of research works of a significant number of young and more intelligent faculty members. Publication from young generation is increasing leaps and bounds but quality needs to be enhanced. The attitude of the policy-makers and regulators are also changing in favor of development of the education system. More funds are now being invested for modernization/improvement of commerce/accounting education. All these raise hope in me for a brighter future of accounting education in India in the decades to come.

The present century is the century of "knowledge society" which depends on creativity - the lifelong capacity and willingness to learn, change and modify existing knowledge. Knowledge, as we know, becomes obsolete faster than technology. So, we have to strive for continuous updating of knowledge.

May we assert that, if in agriculture, IT and Science India can be a mighty force in the world to reckon with, why not in Accounting Education in the foreseeable future?

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STOCK SELECTION, MARKET TIMING AND MUTUAL FUND PERFORMANCE

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ABSTRACT

The professional fund management is expected to reward investors with higher returns for the risk that the funds are exposed to. The excess return that is result of superior stock selection and better market timing ability is the value that the fund management team adds to the investors. Thus, these two measures are important criteria for investors' investment decisions. This paper attempts to decompose the performance of 185 equity diversified mutual funds in India in to excess return resulting from the market timing ability and stock selection ability of the fund management team over ten years period, from 2003 through 2013. Stock selection ability is measured by Fama's Selectivity measure and for timing ability is measured by Treynor-Mazuy model (1966) and Henriksson-Merton model (1981). The empirical results reported here reveal that mutual fund managers have not been able to demonstrate superior stock selection ability consistently over the ten years period of the study. We find that the stock selection ability has rewarded investors the most in initial period of the study. In recent years, very few funds have shown favorable stock selection. Examining market timing ability, results show that the fund managers have not been able to time the market to generate superior returns for their investors. This implies that there are other factors which influence fund performance.

Key Words: Market Timing, Stock Selection, Treynor & Mazuy Model, Henriksson & Merton Model, Mutual Fund Performance

INTRODUCTION

The Indian mutual fund industry, though small in comparison to the size of the Indian economy, offers Indian, and in some cases global investors, both big and small, an opportunity to invest safely and securely, at a bargain cost, in a varied range of securities, spread across a wide range of sectors and industries. In India, equity markets are volatile and common people are less aware about this market, therefore a question mark is put on the Equity markets liability on mutual funds; hence it is an important topic of research. Indian mutual fund industry has registered an amazing growth rate and has emerged as significant financial intermediary.

Market timing strategy in its simplest form can be explained as a strategy of choosing the right instant to invest. A portfolio is shaped in accordance with the co-movements of the market as whole, and in accordance with the price movements. This approach aims to predict whether the market will be bullish or bearish. The structure of the portfolio is shaped according to these predictions. An investor using this approach is trying to get the better off the market most of the time. In other words, this approach implies that an investor is forecasting the inclination of future market trends. Usually, this ability is associated to investment funds and managers.

Two of the pioneering models, usually discussed in the literature for market timing abilities of fund managers are Treynor-Mazuy (1966) and Henriksson-Merton (1981). Stock picking ability of fund managers can be estimated by Fama (1992) Selectivity Measure. The main emphasis of this study is on these three models, with an application on Indian Equity Diversified Standard Growth plans.

LITERATURE REVIEW

Extensive research has been conducted in past to establish effects of Market Timing and Selectivity on Mutual Funds' performance. In India, performance assessment of Mutual Funds' has received huge attention from both managers and academicians. Eddy Junarsin (2013) used data from 2003 to 2009, to study the characteristics of mutual fund holdings, and examine mutual fund performance with characteristic-based benchmarks. Junarsin employed two major databases: CRSP survivorship-biasfree mutual fund database and CRSP main database, and applied two approaches to test the hypotheses: Grinblatt and Titman's (1993) measure and Daniel et al.'s (1993) and Wermers (2000) benchmarks' characteristic selectivity, characteristic timing, and average style measures. She found out that the result of hypothesis as indicated by Grinblatt Titman measure were significant but negative. She concluded that fund managers do not have particular capability of outperforming benchmarks and Junarsin further stated that, overall, the test results are not in favor of the fund manager's ability.

Kumar (2012) studied monthly data of 28 equity diversified Indian fund schemes for the period from January 2007 to June 2011. He found out that, most of the funds were able to beat the benchmark markets. Superior results giving fund schemes were open to the elements of higher risk and were less affected by market risks. All the funds under his study were comparatively exposed to less risk than the market, but to a high degree of volatility. A majority of the funds were sensibly diversified and condensed the unique risk. As a result, unique risks and the returns were unconstructively associated. Kumar's study also said that, almost 58% of fund schemes were able to beat the market by stock picking ability. However, like Junarsin, Kumar also stated that as far as market timing is concerned, the fund managers were more or less unsuccessful both to buy stocks in

down market and to sell stocks in up market. That is, fund managers fail to take benefit of Market Timing.

Daniel et al. (1997) developed and applied new measures of portfolio performance that used benchmarks based on characteristics of stocks held by portfolios being evaluated. Based on these benchmarks, "Characteristic Timing" and "Characteristic Selectivity" measures were developed to identify respectively, whether portfolio managers can profitably time their portfolios and whether managers can pick stocks that do better than the common stocks having same characteristics. They used these measures on over 2500 equity funds and found out that, Mutual Funds, chiefly the growth funds, exhibit some selectivity ability, but these funds showed no timing ability.

Ferson and Haitao (2013), stated that, the investment results of portfolio managers depends on market conditions and volatility timing as well as stock selection. By their study they found out that, mutual funds with more vigorous responses to volatility have better results. Funds demonstrate more (less) ability to time market factor levels when an investor sentiment gauge is low (high). Labelling of funds by factor model R-squares and other evidence established their findings that the more active funds have superior results.

Juan C. Matallín-Sáez (2006) in his study of Mutual Fund Performance measured the results of assertively managed fund and compared them with benchmark that represents fund. In particular he studied the result on mutual fund assessment if a pertinent benchmark is absent. This effect was studied in three elements of dynamic management, that is, stock picking, market timing, and seasonality. The study was conducted for a sample of Spanish mutual funds, and Juan found that the keeping out of benchmarks, mainly that corresponding to small-cap stocks, leads to larger evidence of negative market timing and positive seasonality at year beginning.

Initial studies on fund performance such as Sharpe (1966), Treynor (1965) and Jensen (1968) used Capital Asset Pricing Model (CAPM) with a single benchmark for assessing performance. Treynor (1965) had related the performance and the risk measured through beta (systematic risk). By using the reward to volatility ratio he found that the funds did not perform better than benchmarks. Treynor and Mazuy (1966) attempted to study a fund manager's ability to time the market by using the quadratic Treynor and Mazuy model. They did not find any such evidence in the study of 57 funds for the period 1953-1962. Sharpe (1966) used the CAPM to gauge the fund results. He supposed that probable return of a fund and its risk (S_p) are linearly associated. He found that sampled funds underperform the Dow Jones Index for 34 open-ended funds during 1954-1963.

Jensen (1968) attempted to find the better stock picking ability. He studied 115 funds for the time period 1945-1959 and found that the fund managers are lacking such

expertise. Sharpe and Jensen seemed to authenticate the Efficient Market Thesis (EMT) which states that since security prices imitate all available information it is impossible to beat the market by active portfolio market (Fama, Efficient Capital Markets: A Review of Theory and Empirical Work, 1969). Though there has been wide research in the area of Market Timing, Selectivity and Mutual Fund Performance but still, researchers have not found any common ground to agree upon.

Stock picking ability of fund managers is still given some credence but market timing ability of fund managers and linked fund performance, remains a big question to be answered. The present study focuses on the Market Timing and Selectivity of Mutual Funds and tries to ascertain whether these can be used to gain superior results than market.

OBJECTIVES

1. To find out whether Mutual fund managers are able to beat the market by their stock selection skills.
2. To find out whether market timing for mutual funds exists and if so, are fund managers able to time the market well.

RESEARCH METHODOLOGY

Research Design

Scope: Equity Diversified Large, Small, Multi and Medium sized Open-Ended Growth Mutual Funds running at least for last 3 years.

Study Period: September 2004 to June 2014.

Data collection: Data is collected from ACEMF for last 10 years from Sep 2004 to June 2014. Historical Quarterly Data is taken to do the analysis over the time period. Risk free rate is taken as 10Y G-sec bond for each quarter. Data for G-sec is taken from NSE G-Sec Index.

Variables and Models

Models

Fama's Selectivity: This model compares the results, calculated in terms of returns of a fund with the basic return corresponding with the total risk linked with it. The dissimilarity amongst these two is taken as a gauge of the performance of the fund and is known as *selectivity*. The *net selectivity* represents the stock selection skill of the fund manager, as it is the extra return in addition to the return required to pay off for the total risk taken by the fund manager. Higher value of selectivity indicates that fund manager has obtained better performance as compared to the performance

corresponding with the level of risk taken by him. Hence, the Fama decomposition measure is written as:

$$\text{Net Selectivity} = (R_p - R_f) - \beta_p / \beta_m (R_m - R_f)$$

A positive high value of net selectivity represents that the fund has achieved better returns, and investors are benefited out of the stock picking ability of the fund manager.

Market Timing: Superior performance of the mutual fund managers occurs because of their ability to pile the stocks during down time and sell the stocks at correct uptime. Fund manager’s ability to forecast the returns on individual assets helps in superior performance of the fund.

Treynor and Mazuy Model: Treynor and Mazuy (1966) has introduced the following model:

$$(R_p - R_f) = a + B (R_m - R_f) + \gamma (R_m - R_f)^2 + E_p$$

Treynor and Mazuy explained that if a manager can predict market returns, he will clutch more of the market portfolio when the return on the market is high and a smaller fraction when the returns on the market are low. Thus, the portfolio performance will be a nonlinear function of market return. A positive Gamma value of indicates superior market timing skill.

Henriksson and Merton Model: This model proposed following equation to establish market timing ability of fund managers:

$$(R_p - R_f) = a + B (R_m - R_f) + \gamma [D(R_m - R_f)] + E_p$$

Where, D is a dummy variable

$$D = 0, \text{ if } (R_m > R_f) \text{ and,}$$

$$D = -1 \text{ otherwise}$$

In contrast to linear beta, portfolio beta in this model is assumed to toggle between the two betas. A huge value means that the market is likely to better perform, i.e., when $R_m > R_f$ (up market), and a diminutive value means the opposite, i.e., $R_m < R_f$ (down market). Consequently, it is said that a winning market timer would pick a high up market beta and a low down-market beta. A positive value of Gamma indicates superior market timing skill.

EMPIRICAL RESULTS

Stock Selection Ability

Table 1: TnM, HnM and Fama Selectivity Measure for Large Cap Funds

Year	No. of Funds Exhibiting Positive Value		
	Fama Measure	TnM	HnM
2004	21/22	16/22	15/22
2008	37/40	38/40	25/40
2014	1/62	19/62	14/62

Table 1 presents Fama Selectivity measure for Large Cap Funds. The professional intelligence of the fund managers to select the undervalued stocks has been mixed as

far as the sampled mutual funds are concerned. Under large Cap Category 90% – 95% funds have recorded positive high value from September 2004 to December 2007 but from Jan 2008 onwards till June 2014 all most all the funds have shown a negative value, except for 1% - 2% of funds which have shown positive value.

Table 2: TnM, HnM and Fama Selectivity Measure for Mid Cap Funds

Year	No. of Funds Exhibiting Positive Value		
	Fama Measure	TnM	HnM
2004	5/6	5/6	5/6
2008	25/27	27/27	22/27
2014	4/36	0/36	2/36

Table 2 presents the measures of stock selection skill for Mid Cap Funds. In Mid Cap funds in Sep 2004, 91% of funds have positive value of Fama’s Measure and in 2005 76.9% have high positive value. In the year 2009 positive selectivity measure drops to only 24% of the total funds. In 2010 and 2011 there are signs of improvement (around 60% of the funds have positive selectivity measure) but in 2014 positive Fama’s selectivity is shown by only 5.4% of the funds.

Table 3: TnM, HnM and Fama Selectivity Measure for Multi Cap Funds

Year	No. of Funds Exhibiting Positive Value		
	Fama Measure	TnM	HnM
2004	11/18	13/18	10/18
2008	23/44	38/44	32/44
2014	1/81	23/81	13/81

Table 3 presents the measures of stock selection skill for Multi Cap Funds. In Multi Cap funds, 49%-59% of the funds have positive Fama’s selectivity measure from 2004 to 2008 but after 2008, number of funds showing good selection skills have dropped drastically. In 2014 only 0.62% of the funds have positive Fama’s selectivity measure.

Table 4: TnM, HnM and Fama Selectivity Measure for Small Cap Funds

Year	No. of Funds Exhibiting Positive Value		
	Fama Measure	TnM	HnM
2004	1/1	1/1	1/1
2008	¼	2/4	2/4
2014	0/5	4/5	3/5

Table 4 presents the measures of stock selection skill for Small Cap Funds. Whereas, large number of small Cap funds (>75%) have high Fama’s measure value from 2004 to 2006 but after that from 2007 till 2013 (except 2009), only 22% - 25% of the funds have positive Fama’s value and in 2014 none of the fund show positive value.

Market Timing Ability

The timing of purchasing and selling the stocks is also important for the better performance of the fund schemes apart from stock picking ability. In this context, the **Treynor and Mazuy (TnM) model** has been estimated and a part of the results are presented in Tables 1, 2, 3 and 4. It seems from the tables that Indian fund managers' controlling the equity diversified schemes are not getting good results in timing the market in the recent past. For instance, out of 62 large cap funds sampled only 19 have recorded positive coefficient of Gamma in year 2014. Year 2008 has been an exception wherein all the funds show a positive Gamma value. In earlier years that is 2004-2005 almost 76% of the funds showed positive Gamma value but after 2009 the number of funds with good Gamma coefficient value has decreased drastically.

In Mid Cap range no fund shows positive gamma value in year 2014. In 2006 – 2007, 36% of the funds show positive Gamma value and in years 2011-2012 this value dropped to 27% of the total number of funds. In multi Cap funds, 23 out of 81 funds show positive Gamma value in year 2014 and 14 out of 81 funds have positive Gamma value in year 2013. In 2008, 38 out of 44 funds exhibited positive Gamma value and in year 2004, 14 out of 18 funds have good Gamma coefficient.

In Small Cap funds category, 50% of the schemes show a positive Gamma value from 2004 to 2014, except for years 2009 and 2010. To substantiate the timing ability of the fund managers, **Henriksson and Merton (HnM) model** has been estimated that take the up market beta ($R_m > R_f$) and the down market beta ($R_m < R_f$), and the part of result is presented in Tables 1, 2, 3 and 4.

Amongst large Cap funds most of the schemes have shown some market timing ability in period of 2004-2008 (on average 60% – 65%). But in year 2014 only 14 schemes out of 62 have shown a sufficiently positive coefficient value. In year 2008, 62.5% of the funds show positive coefficient value. In Mid Cap funds 2 out of 37 schemes have shown a positive coefficient value in year 2014 and in 2008 no fund show positive coefficient value. In 2004 5 out of 6 funds show positive coefficient value. In Multi Cap Funds, 16% of the funds show positive coefficient value in year 2014. Whereas, the number of funds showing positive coefficient value is 55% and 63% in years 2004 and 2008 respectively. In the Small Cap category, 3 out 5 funds show positive coefficient value in year 2014. In year 2008 2 out of 4 funds show positive coefficient value and in year 2004 1 out of 1 fund shows positive coefficient value.

Regression Analysis (See table 5,6 and 7)

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Table 5: Regression Analysis Result for Large Cap Funds

Year	Adjusted R Square	Regression Equation
2004	81.23%	$y = 28.667 - 1360.04x_1 + 78.59x_2 - 0.00464x_3$ (-7.75) (9.11) (-0.057)
2005	39.21%	$y = 8.10 + 236.49x_1 - 12.178x_2 - 1.18x_3$ (2.01) (-0.75) (-2.45)
2006	74.32%	$y = 7.31 - 0.85x_1 + 0.96x_2 + 0.98x_3$ (-0.41) (0.32) (2.72)
2007	28.86%	$y = 7.5 - 24.74x_1 + 19.32x_2 - 0.94x_3$ (-3.99) (5) (-7.7)
2008	59.63%	$y = 15.03 - 65.64x_1 + 23.06x_2 - 0.21x_3$ (-8.14) (8.42) (-1.3)
2009	93.38%	$y = -11.15 - 83.45x_1 + 12.30x_2 + 0.13x_3$ (-3.79) (5.51) (2.89)
2010	97.39%	$y = -6.13 - 0.78x_1 + 1.89x_2 + 0.14x_3$ (-0.25) (0.85) (2.34)
2011	79.87%	$y = 1.17 - 28.26x_1 + 20.40x_2 - 1.16x_3$ (-15.44) (14.21) (-7)
2012	94.22%	$y = 3.51 + 72.38x_1 - 2.59x_2 + 0.84x_3$ (2.51) (-1.2) (40.35)
2013	99.73%	$y = 8.30 + 0.03x_1 - 0.95x_2 + 1.19x_3$ (17.39) (-17.5) (286.34)

Table 6: Regression Analysis Result for Mid Cap Funds

Year	Adjusted R Square	Regression Equation
2004	70.58%	$y = 29.38 - 1243.87x_1 + 56.377x_2 + 0.72x_3$ (-4.179) (4.45) (4.467)
2005	90.20%	$y = 10.15 - 398.358x_1 + 82x_2 - 3.32x_3$ (-5.10) (6.85) (-7.78)
2006	76.73%	$y = 8.95 + 0.27x_1 - 0.36x_2 + 0.98x_3$ (0.14) (-0.13) (2.63)
2007	80.32%	$y = 0.95 - 81.70x_1 + 59.94x_2 - 2.80x_3$ (-16.65) (18.51) (-16)
2008	93.75%	$y = 14.89 - 110.937x_1 + 43.04x_2 - 1.85x_3$ (-15.98) (15.85) (-9.48)
2009	89.69%	$y = -10.75 - 146.663x_1 + 21.26x_2 - 0.15x_3$ (-3.60) (4.7) (-1.52)
2010	99.24%	$y = 7.84 + 1.52x_1 - 0.11x_2 + 0.34x_3$ (1.3) (-0.13) (13.68)
2011	56.71%	$y = 0.53 - 8.75x_1 + 4.58x_2 + 0.70x_3$ (-6.3) (4.41) (4.59)
2012	97.02%	$y = 3.22 + 15.20x_1 - 1.30x_2 + 0.87x_3$ (1.3) (-1.49) (55.62)
2013	99.84%	$y = 8.25 + 0.027x_1 - 0.827x_2 + 1.16x_3$ (15.98) (-16.03) (234.71)

Table 7: Regression Analysis Result for Multi Cap Funds

Year	Adjusted R Square	Regression Equation
2004	83.01%	$y = 26.69 - 710.86x_1 + 52.05x_2 + 0.13x_3$ (-2.63) (3.98) (1.84)
2005	63.71%	$y = 9.56 - 179.78x_1 + 53.73x_2 - 3.09x_3$ (-1.85) (3.56) (5.63)
2006	82.45%	$y = 8.99 - 8.83x_1 + 12.81x_2 - 0.51x_3$ (-15.79) (16.64) (-6.78)
2007	46.29%	$y = 5.48 - 49.56x_1 + 36.03x_2 - 1.56x_3$ (-9.10) (10.14) (-10.44)
2008	79.62%	$y = 15.26 - 91.33x_1 + 34.65x_2 - 1.15x_3$ (-8.67) (8.65) (-4.13)
2009	88.99%	$y = -10.34 + 19.18x_1 + 2.07x_2 + 0.29x_3$ (0.52) (0.53) (3.58)
2010	97.71%	$y = 6.3 - 4.41x_1 + 4.43x_2 + 0.13x_3$ (-2.92) (3.99) (4.15)
2011	60.35%	$y = 1.25 - 14.58x_1 + 9.84x_2 + 0.052x_3$ (-10.19) (9.17) (0.49)
2012	86.74%	$y = 2.32 - 62.56x_1 + 6.17x_2 + 0.75x_3$ (-2.54) (2.96) (27.20)
2013	99.71%	$y = 8.29 + 0.029x_1 - 0.87x_2 + 1.17x_3$ (19.40) (-19.51) (297.52)

Tables 5, 6 and 7 show the significance of the influence of Fama's selectivity measure, TnM market timing ability measure and HnM market timing ability measure on the mutual fund return.

For Large Cap Funds, from 2004 to 2013, Fund Returns are positively correlated with TnM measure in years 2005 and 2012 to 2013 with significant t-statistics and in years 2004, 2007, 2008, 2009 and 2011, Fund Returns are positively correlated with HnM measure with significant t-statistics. In years 2006, 2009, 2010 and 2012 to 2013, Fund Returns are positively correlated with Fama Selectivity measure with significant t-statistics.

In Mid Cap Funds, only in years 2012 and 2013 fund Returns are positively correlated to TnM measures' values with significant t-statistics. In years 2004, 2005, 2007 to 2009 and 2011 to 2013 fund Returns are positively correlated to HnM measures' values with significant t-statistics. In year 2004 and 2006 and from 2010 to 2013, Fund Returns are positively correlated with Fama Selectivity measure with significant t-statistics.

In Multi Cap Funds, from 2004 to 2008 Fund returns are better predicted by HnM Model than TnM or Fama Selectivity models. From 2009 onwards except for years 2010 and 2011 Fama selectivity appears to be a better measure.

For Small Cap Funds, the sample size is very small as compared to other categories to comment justifiably. But still in these funds it appears that, Fama Selectivity measure has better predicted the Fund Returns as compared to TnM and HnM models.

FINDINGS AND DISCUSSION

From the empirical results obtained for Large Cap Funds it is easy to interpret that majority of Large Cap Funds show good market selectivity and comparatively descent timing ability in initial period of 2004 to 2008. After recession of 2008 there is some improvement in year 2009 but matching to recent volatile times there are no signs of market timing and selectivity in recent past. Multi Cap Funds show average selectivity performance in initial 5 years (50%-60%) which further decreases after that, though the change in performance is not as drastic as in case of large cap funds. As far as timing ability is concerned, TnM model show decent timing abilities for these funds in initial years and HnM model show comparatively less timing ability during the same period. In Mid Cap Funds, Selectivity is high in initial years i.e., 2004-2005 and it decreases to average selectivity performance in years 2006-2008 wherein, half of the funds exhibit selectivity ability. In recent past, after recession of year 2008 selectivity performance of funds have again improved in 2013 with more than 62% of the funds showing positive selection ability. But as far as market timing ability is concerned, these funds have failed to exhibit good timing ability from 2004-2014. In initial years market timing ability is exhibited by 26% to 34% of the funds, which decreases to as low as 0% in recent years. Small Cap Funds show a decent timing ability over the entire period from 2004-2014 except for year 2008. On an average 50% of small Cap Funds exhibit timing ability. But stock selection ability of these funds is no better than other categories. On an average, around 25% of such funds exhibit selection ability.

It is clear from the analysis that though there exist selection ability and timing ability in initial years i.e., from 2004-2007, but since recession year i.e., year 2008, fund managers have failed to achieve superior performance to beat market benchmark. Fund managers have not been able to book overtly high returns during boom period neither they are able to glide through volatile times. It is evident from the study that fund performance cannot be completely determined from timing and selectivity ability only and there are other factors also which influences fund performances. This implies if there are other factors which determine fund returns to a greater extent than such factors should be studied.

It is to be noted from regression analysis that, HnM and TnM measures' behaviour is found to be contradictory in estimating better Fund Returns and this is in confirmation with the existing literature.

CONCLUSION

This study has been conducted to assess equity diversified mutual fund schemes between September 2004 and June 2014. An effort has been made to assess the funds' performance through manager's capability to select the right stocks and to time the market. The study reveals that mutual fund schemes are not able to beat the market by stock selection skills in recent times. Though, during boom period many schemes were able to beat the market index. As far as timing the market is concerned, the fund managers almost failed both to book higher returns in the up market and mount up the stock in the down market. Both the models used to study the timing ability of the fund managers did not reveal any such capability in this front, with HnM model being stricter in this matter than TnM model.

Many schemes showed good timing ability in initial years like from 2004-2007 but, they have failed to maintain same pace after the recession period. This implies lack of perseverance in fund management skills. Absence of market timing ability also raises serious concern about the fund management expenses incurred by the asset management companies. Investors must question about the fact that if fund managers are not able to time the market to generate additional return, is the expense ratio of these funds justified. Investors may consider funds with lower turnover and lower expense ratios. Investors may also consider funds that mimic the broader index because active management does not seem to reward them for the additional risk exposure.

Lack of market timing ability of the mutual fund managers gives lead to another research problem that if fund managers are not able to time the market for higher returns, which other factors the investors should consider while selecting funds for investment.

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IMPACT OF MERGERS ON CORPORATE PERFORMANCE: AN EMPIRICAL ANALYSIS OF RELATED AND UNRELATED MERGERS

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ABSTRACT

To create value for stakeholders, companies follow external-restructuring strategies like mergers and acquisitions. The prime objective of these strategies is to generate synergy. Synergy is the golden prize of mergers, and flourishes when the combination of disparate parts generates more revenues and efficiency than what the individual parts could muster as standalone units. However, there are evidences on related mergers that the acquiring companies have not benefited or are actually worse off as compared to unrelated.

In the present study, the merged companies have been categorized into two groups that are related mergers and unrelated mergers. The data have been collected for five performance variables over the period of ten years and grouped into two pairs. The first pair shows pre-merger data of the companies and second pair shows the post-merger data of the companies. The paired sample t-test has been used for analysis purpose. Variation in the performance has also been analysed with ANOVA technique. The results show that the unrelated merger performance is significant as compare to related merger in the post-merger period.

Key Words: Difference Observed Mean, Mergers and Acquisitions (M&A), Related Mergers, Strategy, t-value, Unrelated Merger, Value Creation

INTRODUCTION

The corporate restructuring has multiple forms of change in organisations such as portfolio, financial, and organizational restructuring. The portfolio restructuring may occur through mergers and acquisitions, and spin-off. Financial restructuring includes leverage buyouts (LBO), equity carve-outs or recapitalizations. The organizational restructuring refers to change in internal reorganizations or downsizing (Brown and Singh, 1993; Gibbs, 1993). The effect of these restructuring could be observed through business expansion, controlling of multiple businesses in case of portfolio restructuring,

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cash flows and managerial incentives in case of financial restructuring, and employee satisfaction or better communication in case of organizational restructuring (Zu, 2009).

Business expansion has been a motivating factor to portfolio/ external restructuring of a firm. M&A are one of the most important and executed strategy among other alternatives of business expansion. A firm may deploy its resources either in the same business or join hands with other similar/ different business. As a corporate restructuring, building from scratch may be feasible strategy, but it may not make much strategic sense in some instances especially in case of external-restructuring (Lorange, 1993). The limitation of growth through internal expansion is that it takes too much time and bear high cost to become giant organisation with global recognition.

The ultimate objective of M&A is to create synergy along with placing organisation in global market by leaving out traditional steps of business growth. Synergy is the excess results over the combined deployed resources, otherwise which would have been deployed separately and might be generated lesser outcome. Synergy creation is wider term encompasses human resources, production optimization, cultural assimilation and organization integration (Kumar and Lal, 2012). However, in the present study only financial parameters have been considered, and in such case synergy might be in the form of increased revenue, effective use of assets, net-worth to shareholders or earnings available to shareholders.

REVIEW OF LITERATURE

Mergers and acquisitions are often classified into horizontal, vertical, conglomerate and concentric mergers, depending upon the extent to which business activities of the acquired company are related to those of the acquirer (Cartwright and Cooper, 1996; Walter, 1985). The contribution made to total synergy become more important when two similar companies merged as compare to dissimilar companies. But, there is often a tendency, in case of related mergers, to overestimate the possible synergistic effect (Hogarty, 1970) consequent of which the acquiring companies do not perform well or actually worse off as compared to unrelated mergers (Anand and Singh, 1997). Integration of technology, pooling of financial resources (Flanagan, 1996), employees relation, customers and supply chain are factors which create difficulty to achieve synergy (Chatterjee, 2007). On the contrary, Singh and Montgomery (1987), and Angwin (2007) found that companies' acquisitions that are related in product, market or technological terms, create high value gains than unrelated acquisitions.

Jensen and Ruback (1983) argued that gains do not come from extra market power of the enlarged company, but from other factors called as improved management. Kumar (2013) stated that there is difference in the importance of synergy as levels of substantial shareholdings vary of acquired company in pre-M&A period. Roll (1986) argued that companies often go for acquisition to obtain their 'hubris' satisfaction. In

the hubris approach managers of the company pay high bid if the expectation of returns are high and put the acquired company in losses.

The quality of strategic vision and degree to which it is shared with the acquirer company become important in the integration process to achieve synergies (Haspeslagh, 1991). Although, integration carries stress for an organization and stakeholders to attain synergy, but it could be accomplished if companies develop and adhere to a highly disciplined strategy of 'adding value' from day one, starting from implementing blueprint for future growth. M&A, because, is a sporadic event and there is very little scope for companies to learn from their past experiences, so it becomes more essential for the companies to focus on pre and post M&A strategy (Kumar 2010). Corporate managers must take a proactive role in identifying synergies. Balance-sheet approach to weighing costs and benefits can help managers to sort out these complex issues (Pralhad and Hamel, 1990). Boardman and Vinning (1989) suggests four alternative profitability measures *viz.*, net income, return on equity, return on assets and return on sales to evaluate corporate performance. The active participation of managers has a positive effect on productivity after mergers (Machintosh, 1985) which turn transactional integration into success. The different motives of M&A resulted into increasing number of deal on mergers and acquisitions in India, especially in the first decade of twenty-first century (Kumar, 2013).

OBJECTIVES OF THE STUDY

The prime aim of the present study is to examine the impact of M&A on corporate performance, first, on the basis of relatedness of the merger and, second, on the basis of time period with the help of selected parameters. The following objectives have been framed to accomplish the said aim:

- To study the impact of M&A on corporate performance on the basis of relatedness of the acquired company and the target company.
- To investigate the permanence of the M&A on corporate performance.
- To examine the variation in the impact on the basis of relatedness of the companies.

HYPOTHESES OF THE STUDY

The first hypothesis of the study is to test the post-merger performance as stated below:

$H_{0,1}$: there is no difference between the pre and post merger performance of the sample companies on selected performance indicators.

$H_{1,1}$: there is a difference between the pre and post merger performance of the sample companies on selected performance indicators.

The second hypothesis is to investigate the longevity of the impact as follow:

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H_{0,2}: there is no difference in performance of the companies gone for related merger and unrelated merger on the basis of longevity of the impact of M&A.

H_{1,2}: there is a difference in performance of the companies gone for related merger and unrelated merger on the basis of longevity of the impact of M&A.

The third hypothesis of the study is to examine the variation in the performance of related and unrelated mergers during pre and post-merger period.

H_{0,3}: there is no variation in the pre and post merger performance on the basis of relatedness of merger.

H_{1,3}: there is a variation in the pre and post merger performance on the basis of relatedness of merger.

METHODOLOGY OF RESEARCH

Data Collection

A sample of sixty companies has been considered, those have gone for mergers. The companies have been categorized into two groups one is related mergers and second is unrelated mergers. Five performance parameters have been taken into account, those shows financial performance of the companies. The post-merger performance has been investigated in comparison of pre-merger performance. The data have been collected over the period of ten years and grouped into two pairs, five years of each of pre and post merger. The data have been collected from the database software PROWESS provided by Centre of Monitoring Indian Economy (CMIE), website of BSE and NSE. The nature of data is secondary.

Performance Parameters

Parameters considered to make analysis are given below with their relevance:

Table 1: Selected Performance Parameters

S.No.	Selected Performance Variables	Result Accessibility/ Indication
1.	Sales Growth (SG)	Ratio used to observe short-term profitability
2.	Return on Net Worth (RONW)	Long-term profitability and solvency ratio
3.	Post-Tax Rate of Return on Equity Assets (PTREA)	Return to equity shareholders after tax
4.	Total Assets Turnover Ratio (TATR)	Long-term assets capacity/ solvency ratio
5.	Earnings Per Share (EPS)	Ratio indicates the earnings capacity of equity shareholders after setting off all obligations.

Source: Author Owned

Statistical Tools Used

To make analysis of first two hypotheses, paired sample t-test has been applied. To examine whether the difference is positive or negative, the difference observed mean statistics has been used. The negative score of difference observed mean suggests the improved performance and positive score of difference observed mean suggests the decline in the performance after merger. SPSS-16 has been used for statistical calculations. The t-test algorithms (Pfaffenberger, R. C. and Patterson, James H., 1981) are as follow:

Mean for variable X and Y

Weighted mean for variable X

$$\bar{X} = \sum_{i=1}^N W_i X_i \div W$$

Weighted mean for variable Y

$$\bar{Y} = \sum_{i=1}^N W_i Y_i \div W$$

X_i = value of variable X for case i.

Y_i = value of variable Y for case i.

W_i = weight for case i.

W = sum of weights.

N = number of cases.

Variance (t-test algorithms)

$$S_x^2 = \left[\sum_{i=1}^N W_i X_i^2 - \left(\sum_{i=1}^N W_i X_i \right)^2 \div W \right] \div (W-1)$$

Similarly for S_y^2 .

Difference of Means (t-test algorithms)

$$D = \bar{X} - \bar{Y}$$

Std Error of Diff of Means (t-test alg)

$$S_D = \sqrt{\left[(S_x^2 + S_y^2 - 2S_{xy}) \div W \right]}$$

t-statistic

$$t = D \div S_D$$

The above statistics has been performed for each paired year of performance. The first pair represents the comparative performance for one year before settlement and one year after the settlement of M&A i.e., Y-1 to Y+1. The second paired set as Y-2 to Y+2. Similarly, Y-3 to Y+3, Y-4 to Y+4, and Y-5 to Y+5 has been placed for third, fourth and fifth group, respectively. The aim of framing such paired is to investigate longevity of the

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impact of M&A over the post-M&A five year in comparison of pre-M&A five year performance.

To investigate third hypothesis of the study, ANOVA technique has been used which discloses variance between given variables on the basis of controlled variables. The related and unrelated mergers, and pre and post-merger period have been considered as controlled variables for analysis. F-test is used to make comparison of the components of the total deviation, for statistical significance purpose. F-test is the ratio of variance between ‘Mean Score of Treatment’ and ‘Mean Score of Error’ (Morgan, 2011) and expressed as follow.

$$F = \frac{\text{Mean Score Treatment}}{\text{Mean Score Error}} \quad \text{or} \quad F = \frac{\frac{\text{Sum Square of Treatment}}{(\text{Number of Treatments} - 1)}}{\frac{\text{Sum Square Error}}{(\text{Total number of Cases} - \text{Number of Treatment})}}$$

EMPIRICAL FINDINGS AND ANALYSES

The statistical results of the financial performance of sample companies have been presented in Table 2 and the variation of performance between related and unrelated mergers is stated in Table 3. The first part of the Table 2 shows the results for unrelated mergers and second part shows results for related mergers. Table 3 shows the variation in the performance on the basis of relatedness of merger, and duration of pre and post merger period. The results have been presented in the following section of the study.

Table 2 shows empirical results of paired sample t-test on five parameters considered to evaluate pre and post M&A performance over ten years. It state mean value, standard error and t-value along with p-values. In case of unrelated M&A, the mean (Difference Observed Mean) value for sales growth is -204.62. The negative value indicates the post-M&A sales performance is better than pre-M&A performance. The corresponding t-value is -2.151 and p-value is 0.021 which is significant at the level of 0.05. The sales growth, in case of unrelated M&A has been performed significantly over five years in post-M&A in comparison of pre-M&A. Similarly, the sales growth performance, in case of related M&A, has also been significant in post-M&A. The mean value of return on net worth, in case of unrelated M&A is negative in all cases which show the performance has been improved. But the t-test values are not statistically significant except the pair of Y-2 to Y+2. Similarly, the t-test results are not significant in case of related M&A as p-values are more than 0.05 levels. The post-M&A performance of post-tax return on equity assets, in case of unrelated M&A, has been improves as shown by the negative mean values for first three pairs *i.e.*, Y-1 to Y+1, Y-2 to Y+2 and Y-3 to Y+3. The performance for fourth and fifth year is not found significant.

Table 2: Paired Sample t-test: Comparative Results of Unrelated and Related M&A

S. N.	Parameters	Relatedness of M&A							
		Unrelated M&A				Related M&A			
1	Year-wise Pairs	Mean ¹	S.E.M ²	Df ³	t-value ⁴ (p-value) ⁵	Mean ¹	S.E.M ²	Df ³	t-value ⁴ (p-value) ⁵
	Y-1 to Y+1	-204.62	95.127	27	-2.151 (.021)*	-117.80	42.573	28	-2.767 (.005)**
	Y-2 to Y+2	-788.14	408.99	27	-1.927 (.032)*	-464.35	168.30	26	-2.759 (.006)**
	Y-3 to Y+3	-1024.17	502.53	26	-2.038 (.026)*	-578.37	143.62	27	-4.027 (.000)**
	Y-4 to Y+4	-1717.59	787.52	26	-2.181 (.019)*	-1000.8	323.46	27	-3.094 (.002)**
	Y-5 to Y+5	-2022.99	891.57	26	-2.269 (.016)*	-1223.9	340.91	27	-3.590 (.000)**
2	Return on Net Worth	Unrelated M&A				Related M&A			
	Y-1 to Y+1	-4.42	5.005	26	-.883 (.192)	3.936	10.04	27	.392 (.348)
	Y-2 to Y+2	-31.49	13.23	26	-2.379 (.012)*	-8.585	10.31	27	-.832 (.206)
	Y-3 to Y+3	-5.39	18.20	26	-.296 (.380)	1.950	11.89	27	.164 (.435)
	Y-4 to Y+4	-18.79	10.76	27	-1.746 (.046)*	-3.317	16.42	27	-.202 (.421)
	Y-5 to Y+5	-.088	22.01	26	-.004 (.498)	-17.211	41.37	27	-.416 (.340)
3	Post-tax Return on Equity Assets	Unrelated M&A				Related M&A			
	Y-1 to Y+1	-39.24	16.208	26	-2.421 (.001)**	-75.13	45.755	27	-1.642 (.056)
	Y-2 to Y+2	-133.30	42.479	26	-3.138 (.002)**	-101.77	45.271	27	-2.248 (.017)*
	Y-3 to Y+3	-116.48	54.353	26	-2.143 (.021)*	-119.22	59.166	27	-2.015 (.027)*
	Y-4 to Y+4	-2.83	166.47	26	-.017 (.493)	-153.41	59.646	27	-2.572 (.008)**
	Y-5 to Y+5	-49.48	84.149	26	-.588 (.280)	-573.90	536.85	27	-1.069 (.147)
4	Total Assets Turnover	Unrelated M&A				Related M&A			
	Y-1 to Y+1	-.0148	.0459	26	-.322 (.375)	.284	.361	27	.786 (.219)
	Y-2 to Y+2	-.165	.083	26	-1.965 (.030)*	-1.16	1.212	27	-.957 (.173)
	Y-3 to Y+3	-.1647	.077	27	-2.132 (.021)*	.112	.093	27	1.200 (.120)

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Parameters	Relatedness of M&A							
	Y-4 to Y+4	-.248	.141	27	-1.751 (.045)*	.245	.205	27
Y-5 to Y+5	-.238	.125	27	-1.893 (.034)*	.553	.474	27	1.166 (.127)
5. Earnings Per Share	Unrelated Mergers				Related Mergers			
Year-wise Performance	Mean ¹	S.E.M ²	D.f. ³	t-value ⁴ (p-value) ⁵	Mean ¹	S.E.M ²	D.f. ³	t-value ⁴ (p-value) ⁵
Y-1 to Y+1	-4.98	1.265	26	-3.934 (.000)**	-3.43	2.853	27	-1.202 (.120)
Y-2 to Y+2	-9.97	4.466	26	-2.232 (.001)**	-7.57	5.541	25	-1.366 (.092)
Y-3 to Y+3	-8.91	4.136	26	-2.154 (.020)*	-6.57	5.708	26	-1.151 (.130)
Y-4 to Y+4	-3.10	4.298	26	-.629 (.267)	-6.74	6.001	26	-1.123 (.136)
Y-5 to Y+5	-5.93	5.729	26	-1.035 (.155)	-21.36	13.897	26	-1.537 (.068)

1. Mean value is the value of 'difference observed mean' (DOM). The negative value shows increased performance after M&A as the post performance value is more than pre M&A's performance.

2. Value of Standard Error Mean.

3. Degree of freedom represents the number of cases considered for statistical calculations.

4. t-value is the statistical value of paired sample t-test.

5. Values in the parentheses are the p-values. P-values are considered at one-tailed test.

* Values are significant at level 0.05.

**Values are significant at level 0.01

Opposite to that in case of related M&A, the performance of post-tax return on equity assets has been increased significantly except first and fifth pair of years.

There is no much improvement has been found in both cases, related and unrelated M&A on total assets turnover. In case of unrelated M&A, the mean values are negative but resultant t-values are not significant except pair Y-2 to Y+2. The positive mean values on total assets turnover, in case of related M&A, depicts decline in the performance in post-M&A period. In case of unrelated M&A, the mean value of earnings per share (EPS) is -4.98 which is negative and shows the increased performance, the corresponding t-test value is also significant at the level of 0.01 for Y-1 to Y+1. The results are significant in case of Y-2 to Y+2. The statistical results for remaining pairs are not significant. No pair result has been found significant in case of related M&A on EPS.

Table 3 explains that sales growth during pre and post merger differs, as the f-test value is significant at 0.001 level. On the other hand, there is no variation in the performance on the basis of relatedness of mergers. However, the performance in both cases has been improved, confirmed from Table 2. The f-test value, in case of return on net worth is not significant for pre and post merger period, it points out that there is no variation

in the performance of companies during pre-merger and post-merger period. However, there is a variation in the performance on the basis of relatedness of merger.

Table 3: Variation in the Performance on the basis of Relatedness and Time

Selected Performance Variables	Variation in Pre and Post Merger Performance (for all sample companies)		Variation in Related and Unrelated Mergers Performance	
	Sum of Squares	F-test (Sig.)	Sum of Squares	F-test (Sig.)
Sales Growth	.218	20.99 (.000)**	.001	.052 (.822)
RONW	43.401	.363 (.555)	840.595	11.144 (.004)**
Post-tax Rate of Return on Equity Assets	93136.434	6.846 (.017)*	35703.005	2.126 (.162)
TATR	.032	.119 (.734)	3.042	30.196 (.000)*
EPS	212.896	10.863 (.004)**	130.585	.443 (.514)

***Values are significant at 0.01 level*

** Values are significant at 0.05 level*

A change has been found in post-M&A performance of post-tax rate of return on equity assets in comparison of pre-merger period, as the f-test value, 6.846, is significant at 0.05 level. The f-test value, 2.126, is not significant in case of relatedness of the mergers which shows that there is no variation in the performance of post-tax rate of return on equity assets on the basis of relatedness of the deal. The results of Table 2 also support that in both type of merger performance has been improved after settlement of deal.

The f-test value, in case of total assets turnover, is 0.119 which is not significant and states that the performance in post-M&A period is not different from pre-M&A performance period. The f-test value is 30.196 and significant at 0.001 level. The significant value explains that there is a variation in the performance of TATR on the basis of relatedness of merger. Table 2, also confirms that TATR is improved in case of unrelated M&A in comparison of related one.

The performance of EPS has been improved in post-merger period, in both cases. Table 2 also illustrates that there is no variation in the performance on the ground of related or unrelated mergers. However, the significant value of f-test, 10.863, in case of variation on the basis of pre and post-M&A period, is significant at 0.05 level which states that there is a variation in the performance in pre and post-M&A period.

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There is improvement in the performance of variables *viz.*, sales growth, post-tax return on equity assets and EPS those support the first alternative hypothesis. The variables, RONW and TATR validates first null hypothesis, *i.e.*, there is no change in the performance after M&A.

For the purpose of second hypothesis, M&A has long-term impact on sales growth in both cases related and unrelated M&A, and TATR in case of unrelated M&A. No impact of M&A has been observed on RONW, TATR and EPS in case of related M&A. In other cases, the impact is either short-term or irregular *such as* in case of RONW in case of related M&A. There is variation in performance of related and unrelated M&A in case RONW and TATR.

CONCLUSION

As the sales performance has a direct relationship with increase in sales (the revenue drivers), there will be an increase in cash or debtors which would have increased the liquidity position of the company. It is apparent from the sales growth and returns on net worth (RONW) that the increased in revenue drivers has not contributed to profitability of the companies after M&A, as RONW performance is not significant in both cases except for Y-2 to Y+2 in case of unrelated M&A.

In case of unrelated mergers, the performance of TATR has been improved as compared to related mergers. Overcapacity of similar assets might have been a reason of insignificant performance of TATR in case of related mergers. And in case of unrelated merger, the dissimilar assets of both companies and usage of different technologies could have been the reason for improved performance after M&A. The results are contrary to Singh and Montgomery (1987) and Angwin (2007).

The short-term profitability performance of the sample companies has been improved because of sales growth. But at the same time companies failed to generate more revenue to meet out all the business expenses to distribute to the shareholders and to retain some percentage of profit for future growth or expansion, as the performance of net worth is found insignificant in Table 2 and Table 3. The critical point of the merger is the excess holdings of assets after merger. The difficulties might have arisen because of inherent risk of the target company, the quality of the assets of both companies, poor effectiveness to manage the resources, and relatedness of the merger. The results are in agreement with result of Flanagan (1996) and Anand and Singh (1997)

It has been observed that wherever the companies' performance is evaluated for short-term profitability, the performance has been improved in most of cases of related and unrelated mergers, both, e.g. sales growth. But variables performances have not been improved which indicate long-term solvency e.g., RONW and TATR especially in case of related mergers. On the basis of five performance parameters, it is apparent unrelated

M&A has performed better (T. Hogarty, 1970) in post M&A period as compare to related M&A.

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Annexure

- **Abbreviations Used:** M&A: Mergers and Acquisitions; EPS: Earnings per share; SEM: Standard error mean; TATR: Total assets turnover ratio; DOM: Difference observed mean. BSE: Bombay Stock Exchange, NSE: National Stock Exchange.

UNVEIL CREATIVE ACCOUNTING THROUGH ESTABLISHING RELATIONSHIP BETWEEN OPERATING CASH FLOW AND PROFIT AFTER TAX

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ABSTRACT

Understanding the intrinsic relationship between operating cash-flow and net income may provide important insight into the performance and economic well being of the firm. The first null hypothesis, that there is no significant difference among different industries of Indian corporate sector regarding generation of cash flow from operating activities, is rejected. The second null hypothesis, that there is no significant difference among different industries of Indian corporate sector regarding generating of profit after tax, is also rejected. Since the calculated value of ' f_{cal} ' (42.97935, 34.09733) is greater than the table value of ' f_{crit} ' (2.312741). Correlation coefficient between OCF and PAT of entire industry is 0.9080266, which indicates a strong correlation between cash flow from operating activity and profit after tax. A ratio or metric that link both operating cash flow and profits makes clear sense and should be of benefit to the financial analyst. At last the possibility of creative accounting has been explored through establishing a relationship between OCF and PAT. The present research paper reveals certain probable earning management techniques by establishing the relationship between OCF and PAT. It also analyze the cash flow from operating activities and profit after tax of different industries (Automobile, cement, power, FMCG, Pharmaceutical, IT, Textile and Steel) of Indian corporate sector. The pharmaceutical and information technology industries reported lesser cash flow from operating activity as compare to profit after tax.

Key Words: OCF, PAT, Creative Accounting, ANOVA, Correlation, stuffing the channel

INTRODUCTION

A company's profit after tax can be measured through certain accounting assumptions regarding revenue and expenses. On the other hand, its operating cash flow (OCF) is an objective measure and it is not subject to personal criterion. The statement of cash flow shows how cash has been generated during a year or a quarter, and how it has been used. Sometimes firms reported impressive amount of profit but they could not collect the associated cash from the transactions that produced income and cash flow becomes

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negative. In such situations, to continue to operate, the companies needed cash from a source other than their primary business operations and they borrowed heavily, this entire picture is presented in living color on a statement of cash flows. The same type of problem was faced by Lehman brothers. Lehman brothers were a famous company of USA and went into bankruptcy zone. This company reported good amount of profit but it could not generate positive cash inflow. The extract of financial statement of three years prior to bankruptcy of Lehman brothers is given here:

Lehman Brothers Holding Inc. Millions of US Dollars

For period ending Nov. 30

	<u>2007</u>	<u>2006</u>	<u>2005</u>
Net Income	4192	4007	3260
Cash from operating	(45595)	(36376)	(12205)
Cash from investing	(1698)	(792)	(447)
Cash from financing	48592	38255	12112
New debt	89683	52934	23789

The company reported rising amounts of net income while failing to generate any cash from its operation, these deficits were offset by borrowings with new debt topping almost \$90 million in 2007, the year before its bankruptcy in 2008. Here a question arises that company were reported good quantum of profits continuously but it could not sustain and went into bankruptcy. It creates doubts about possibility of creative accounting and investor was misleading. This case binds us to ponder to identify the possibility of creative accounting. So here an attempt has been made to unveil the possibility of creative accounting by establishing the relationship between cash inflow and profit after tax of Indian corporate sector.

Ingram and Lee, (1997) suggest that a superior method of measuring economic viability of the firm is to measure the *relationship* between income and operating cash flow. The authors argue further that the *relationship* between income and operating cash flow provides insight into the company's periodic performance as well as a mechanism to determine the likelihood of future expected growth.

Pablo Fernandez (2006) opined that a company's profit after tax is quite an arbitrary figure obtained after assuming certain accounting hypotheses regarding expenses and revenue, on the other hand, its cash flow is an objective measure a single figure that is not subject to any personal criterion.

Grabski John R (2008) explained in his article that understanding the intrinsic relationship between operating cash flow and net-income may provide important insight into the performance and economic well being of the firm.

OBJECTIVES

- To analyze cash flow from operating activities and profit after tax of different industries of in Indian corporate sector
- To analyze relationship between cash flow from operating activities and profit after tax of different industries of Indian corporate sector
- To explore chances of creative accounting through establishing relationship between cash flow from operating activities and profit after tax

HYPOTHESIS

H₀₁ There is a no significant difference among different sectors of Indian corporate sector regarding generation of cash flow from operating activities.

H₀₂ There is a no significant difference among different sectors of Indian corporate sector regarding generation of profit after tax.

H₀₃ There is a no significant relationship between cash flow from operating activities and profit after tax.

RESEARCH METHODOLOGY

Sample Design

Forty eight sample units were taken from different eight sectors of Indian corporate sectors. All these sample units are selected through lottery method (by slips). The automobile, cement, power, fast moving consumer goods (FMCG), Pharmaceutical industry, Information Technology, Textile and steel sectors of Indian corporate sectors are covered. Six sample companies are selected from each sector.

Statistical Techniques

In order to analyze the financial data univariate statistical techniques like mean, coefficient of variation and bi-variate statistical technique like correlation have been administered. To test the hypothesis 't' test and ANOVA statistical techniques have been administered

RESULTS AND DISCUSSION

Analysis of Cash Flow from Operating Activities and Profit after Tax

OCF and PAT of different sectors of Indian corporate sector have been analysed in order to understand the pattern of generation. As we can see in table six, the mean level of OCF and PAT reported by different industries of Indian corporate sector is not same. But

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are these differences statistically significant? To answer this question first two hypotheses have been developed. To check first null hypothesis of the present research paper, that there is no significant difference among different industries of Indian corporate sector regarding generation of cash flow from operating activities the analysis of variance (ANOVA) statistical technique is used. The calculated values are given below:

Table 1: ANOVA Results of OCF

Source of Variation	SS	Df	MS	F _{cal}	P-value	F _{crit}
Between Groups	34260168.71	7	4894310	42.97935	1.68E-14	2.312741
Within Groups	3644027.368	32	113875.9			
Total	37904196.08	39				

Source: own calculation on Excel 2007

At 5% level of significance, the first null hypothesis is rejected since the calculated value of 'f' (42.97935) is much greater than the table value of 'f_{crit}' (2.312741) or p value (1.68E-14) is less than level of significance i.e. 0.05. It clearly indicates that the visible difference in cash flow from operating activities of different sectors is due to major reasons not due to sampling fluctuations. Now it is a matter of further research that what are the reasons responsible for such differences?

The ANOVA is also administered to check second hypothesis whether the difference among the mean profit after tax of different industries of Indian corporate sector is significant or not. The calculated values are given below:

Table 2: ANOVA Results of PAT

Source of Variation	SS	Df	MS	F _{cal}	P-value	F _{crit}
Between Groups	28248714	7	4035531	34.09733	4.32E-13	2.312741
Within Groups	3787304	32	118353.3			
Total	32036018	39				

Source: own calculation on Excel 2007

At 5% level of significance, the second null hypothesis of present research paper, that there is no significant difference among different industries of Indian corporate sector regarding generation of profit after tax, is rejected. Since the calculated value of 'f_{cal}' (34.09733) is greater than the table value of 'f_{crit}' (2.312741) or p value (4.32E-13) is less than level of significance i.e. 0.05. It clearly indicates that the visible difference in profit after tax is due to major reasons and not due to sampling fluctuations or sampling error.

ANOVA results indicated that both OCF and PAT reported by different industries of Indian corporate sector are significantly different and visible difference is due to any particular factor not due to by chance. The F test tells us that at least two means are different of different sectors, but it does not identify which two. It is a further matter of research, In order to find out which of the two means differ, we can apply a further

statistical test to our data. To conduct a posteriori analysis, a number of alternative test like Tukey’s Honestly significant test, student newman-keuls test, Bonferroni t test etc.

Relationship between OCF & PAT

In order to examine the relationship between OCF and PAT, Karl Pearson’s coefficient of correlation is calculated. The correlation is calculated on the basis of three different dimensions of relationship. First: correlation is calculated for each sector on the basis of five years average of OCF and PAT of each sample units. Second: correlation is calculated for each sector on the basis of average of all sample units for each year of OCF and PAT. Third: Single correlation of entire Indian corporate sector.

Table 3: Sector-wise Correlation between OCF & PAT
(On the basis of five years average of particular sample units)

Industries	Automob	Cement	Power	FMCG	Pharma	IT	Textile	Steel
Correlation	0.677	0.995	0.987	0.998	0.991	0.994	0.986	0.871
t- critical value(at 5% level of sig)	2.570	2.570	2.570	2.570	2.570	2.570	2.570	2.570
-calculated value	2.059	22.522	13.981	41.004	17.301	21.744	13.518	3.972
Significant	No	Yes						
H₀	Accepted	Rejected						

Source: own Calculation (as per appendix)

The above table 3 depicted calculated ‘t’ value, critical value of ‘t’ and the coefficient of correlation between cash flow from operating activity and profit after tax of different sectors of Indian corporate sectors. This correlation has been calculated on the basis of value of OCF and PAT which has been derived by taking average of five years of each sample units and then sector wise correlation is calculated. The coefficient of correlation between OCF and PAT is more than 0.87144 in all the sectors except automobile. It is also found that all the sectors except automobile sector have significant correlation between OCF and PAT as it is evident by ‘t’ test. Automobile industry does not have significant relationship between OCF and PAT.

The below table 4 shows the coefficient of correlation between cash flow from operating activity and profit after tax of different sectors of Indian corporate sectors. This correlation has been calculated on the basis of value of OCF and PAT which has been derived by taking average of all sample units of each sector for each year (from 2009 to 2013) and then sector wise correlation is calculated. It reveals that automobile, cement and FMCG have significant correlation but other sectors do not have significant

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correlation as it is evident by 't' test. It indicates majority of sectors do not have significant coefficient of correlation between OCF and PAT.

Table 4: Sector-wise Correlation between OCF & PAT
(on the basis of six companies of each sector average of each year)

Industries	Automob	Cement	Power	FMCG	Pharma	IT	Textile	Steel
Correlation	0.735	0.7921	-0.4173	0.9511	0.5662	0.0552	0.3035	-0.2976
t- critical value at 5% level of significance	2.364	2.3646	2.3646	2.3646	2.3646	2.3646	2.3646	2.3646
t- calculated value	2.658	3.4334	-1.2149	8.1467	1.8174	0.1462	0.8427	-0.8247
Significant	Yes	Yes	No	Yes	No	No	No	No
H₀	Rejected	Rejected	Accepted	Rejected	Accepted	Accepted	Accepted	Accepted

Table 5: Correlation between OCF and PAT
(For entire Indian Corporate Sector)

Overall correlation of entire Indian corporate sector between OCF & PAT	0.9080
Critical value at 5% level of significance on 7 d.f.	2.3646
t- calculated value	5.3094
Significant	Yes
H ₀	Rejected

The above table 5 reveals that correlation coefficient between OCF and PAT of entire industry is 0.9080266, which indicates a strong correlation between cash flow from operating activity and profit after tax. The value of correlation of 0.9080 is derived on the basis of eight sectors only which is quite small and we would now like to check whether or not this provides evidence of significant association between OCF and PAT in the overall population i.e. entire Indian corporate sector. Is this value of 0.9080 due to sampling fluctuations from a population where no real association exists? To answer this we need to conduct an appropriate hypothesis test to check if the population value of association is zero. The calculated value of 't' (5.30946) of entire Indian corporate sector is greater than critical value (2.3646) hence the coefficient of correlation between OCF and PAT is not due to sampling fluctuations but due to major reason. In this way our third hypothesis is also rejected.

Unveil possible creative accounting in Indian corporate sector

The possibility of creative accounting in different sectors of Indian corporate sector has been explored through establishing the relationship between OCF and PAT. The OCF and PAT of different sectors of Indian corporate sector of five years are summarized in the

following table no. 6. On analysing the given table it is found that Steel and pharmaceutical industries generated highest and lowest mean cash flow from operating activities respectively (i.e. Rs.3232 crore and 208 crore). During the entire study period, however fluctuating trend has been observed in all the sectors of Indian corporate sectors. It implies that steel sector capable to generate sufficient operating cash flow surplus to meet out funds requires for new investment and pay dividends as compared to other sectors of Indian corporate sectors.

Table6: Operating Cash Flow and Profit after Tax (Rs. In crore)

Industries	2013	2012	2011	2010	2009	Average	CV
Automobile OCF	2,396.41	2,006.64	2,928.76	1,008.62	1,788.43	2,025.77	0.35
PAT	1,905.66	1,860.49	1,639.06	854.21	963.33	1,444.55	0.35
Difference	490.75	146.15	1,289.71	154.41	825.10	581.22	
Cement OCF	1,016.00	618.00	508.00	538.00	578.00	651.00	0.32
PAT	539.00	259.00	341.00	335.00	419.00	378.00	0.28
Difference	477.00	359.00	167.00	203.00	159.00	273.00	
Power OCF	1,119.00	1,297.00	1,708.00	1,131.00	771.00	1,205.00	0.28
PAT	1,108.00	596.00	385.00	552.00	612.00	587.00	0.42
Difference	11.00	701.00	1,323.00	579.00	159.00	618.00	
FMCG OCF	1,271.00	1,074.00	992.00	721.00	851.00	982.00	0.21
PAT	1,283.00	1,037.00	898.00	721.00	661.00	920.00	0.27
Difference	-12.00	37.00	94.00	0.00	190.00	62.00	
PHARMA OCF	356.00	239.00	221.00	86.00	140.00	208.00	0.49
PAT	256.00	331.00	217.00	201.00	154.00	205.00	0.29
Difference	100.00	-92.00	4.00	-115.00	-14.00	3.00	
IT OCF	1,545.00	1,673.00	2,037.00	1,690.00	1,293.00	1,648.00	0.16
PAT	3,254.00	2,818.00	1,917.00	1,961.00	1,478.00	2,192.00	0.32
Difference	-1,709.00	-1,145.00	120.00	-271.00	-185.00	-544.00	
Textile OCF	392.00	337.00	452.00	531.00	459.00	434.00	0.17
PAT	202.00	314.00	389.00	303.00	391.00	320.00	0.24
Difference	190.00	23.00	63.00	228.00	68.00	114.00	
Steel OCF	3,332.00	2,679.00	3,239.00	3,548.00	3,362.00	3,232.00	0.10
PAT	2,626.00	2,569.00	2,395.00	2,445.00	2,551.00	2,517.00	0.04
Difference	706.00	110.00	844.00	1,103.00	811.00	715.00	

Source: own compilation

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The highest coefficient of variation (CV) and least mean cash flow from operation have been observed in pharmaceutical industry i.e. 0.49 and Rs.208 crore respectively. It implies that pharmaceutical industry not only reported highest fluctuations in cash flow from operating activities but lowest also as compare to other sectors of Indian corporate sector. Highest mean value of Profit after tax is also reported by steel sectors and lowest mean value of profit after tax is also reported by pharmaceutical industry. The same situation has been observed in both the cases i.e. OCF and PAT.

It is found that all the sectors of Indian corporate sector except pharmaceutical, IT and one year of FMCG reported higher OCF as compare to PAT throughout the study period (2009-2013). Although it is very dangerous to draw conclusion on the basis of difference between OCF and PAT, Yet a humble effort has been made to analyse the situation in order to unveil the possibility of creative accounting. It is clear from above analysis that our third hypothesis is rejected. It implies that there is a significant difference between OCF and PAT. The visible difference is not sampling fluctuations but due to major reasons. Now it is a matter of further analyze to identify these reasons. The possible positive and negative reasons including creativity of accounts are explored in the following paragraph.

In an ideal situation, a healthy company should register a higher operating cash flow (OCF) compared to PAT. It is also evident by data given in above table 6. This assumption is based on the fact that the non -cash expenses are added back to PAT to work out the OCF, and a healthy company realizes its dues faster, and also pays its dues in time. However, higher OCF may not always indicate a happy situation from an analysis's point of view. A higher OCF may occur if creditors are not paid, wages and salaries of employees are deferred, and taxes are not paid on time. These are all indications that something is seriously wrong with the company's operation despite having a higher OCF.

On other hand lesser OCF as compared to PAT, may happen if the scale of operations is increasing, the creditors are being paid in advance to ensure smooth supplies in future, wages and other operating expenses are being paid regularly. In such cases, a lesser OCF would indicate a growing firm and working capital lender would be comfortable with this situation. But if lesser OCF is on account of the loss incurred by the organization, this will connote an entirely different meaning. In this case loss incurred is being made good by way of increasing loans and WC credit, in particular. This could be typically a case of throwing good money after bad money. However, in the matured business phase of a firm, if the operating activities still continue to consume cash rather than supplying cash, it might be an indicator of an impending business failure. A typical example of such situation is dot.com, where the cash from operating activities is small, and is often labelled as cash burn situation. Cash Flow Analysis is a better tool.

Both the pharmaceutical and information technology industries reported lesser cash flow from operating activity as compare to profit after tax. These sectors cannot be considered as growing sectors because PAT of some sample units are negative and also fluctuating throughout the study period. It indicates that there is something wrong with the cash cycle in these two sectors. The possible reason is availability of alternative accounting treatment in accounting standards. Although the flexibility is necessary, yet it allows for earning manipulation. Because generally managers book business in a way that helps them to earn bonus, it is safely to assume that the income statement is overstate profits like lehman brothers, Tesco etc.

CONCLUDING REMARKS

The present study reveals certain probable earning management techniques by establishing the relationship between OCF and PAT. Pharmaceutical and information technology industries reported lesser cash flow from operating activity as compare to profit after tax. It indicates that there is something wrong with the cash cycle in these two sectors. The significant difference among different industries of Indian corporate sector regarding both OCF and PAT has been observed. It means the generating capacity of different industries of Indian corporate sector regarding OCF and PAT is not same. The strong significant coefficient of correlation between OCF and PAT for entire Indian corporate sector is also observed. All three null hypotheses are rejected. It means there is a significant difference between different sectors of Indian corporate sectors regarding quantum of generation of OCF and PAT but both variables are highly correlated.

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APPENDIX

- Industry wise Correlation between OCF and PAT (on the basis of five years average of particular sample units)

Sector	Sample Unit	Five Years Average		Correlation
		OCF	PAT	
Automobile	BAJAJ Ltd.	1760.792	1761.794	0.67744
	2 TATA MOTORS	3842.94	1543.124	
	3 TVS MOTOR Company Ltd	230.01	120.596	
	4 Maruti Suzuki India Ltd.	2238.16	1823.88	
	5 Hero Moto Corp Ltd.	1981.068	1595.096	
	6 Mahindra & Mahindra Ltd	2101.664	1822.804	
Cement	Chettinad cement Corporation Ltd.	330.722	92.988	0.99511
	8 Burnpur Cement Ltd	-2.848	0.678	
	9 Ultra Tech cement	1984.484	1291.83	
	10 India Cement	607.656	364.658	
	11 Madras Cement	657.31	345.786	
	12 JK Cement	331.572	174.914	
Power	Reliance Power	-125.654	109.61	0.98745
	14 Suzlon Energy Ltd	764.748	202.1475	
	15 Tata power	1084.612	738.918	
	16 Power Grid Corporation of India	5668.05	2324.182	
	17 PTC India	-229.162	91.142	
	18 HBL power System	69.154	56.74	
FMCG	Britannia Industries Ltd	199.802	165.168	0.99852
	20 ITC Ltd	4382.494	4189.842	
	21 Dabur India Pvt Ltd	395.416	409.078	
	22 Marico Ltd.	181.976	233.568	
	23 Tata Global Beverages Ltd	374.356	170	
	24 Colgate- Pamolive India	357.28	351.692	
Pharma	Cipla ltd	885.546	944.72	0.99175
	26 Piramal Life science	-53.728	-109.343	
	27 Biocon Ltd.	226.932	262.416	
	28 Panacea biotech Ltd	106.964	11.75	
	29 Zenith Health Care Ltd	0.018	0.088	
	30 Novartis India Ltd.	84.484	121.154	
IT	TCS Ltd	4776.536	6906.026	0.99475
	32 Infosys ltd	5013.8	6134.4	
	33 starcom Information Technology	0.756	0.038	
	34 Melstar IT	0.126	-1.2675	
	35 Prism Informatics Ltd.	1.208	1.384	
	36 NIIT Technologies	93.68	110.126	
Textile	Grasim Industries	1573.132	1454.378	0.98659
	38 Lakshmi Mills Co. Ltd	0.812	-4.982	
	39 Bombay Dyeing n Manufacturing co.	158.7	-8.098	
	40 Century Textiles & Industries Ltd	542.324	266.906	
	41 Vardhman textiles Industry	255.666	176.22	
	42 Raymond Ltd	75.754	35.3	
Steel	Tata Steel Ltd	8163.966	5113.252	0.87144

Bhanawat Shurveer

44	Jindal Steel n power		2243.386	1750.422
45	SAIL		4525.724	5665.264
46	Bhushan Steel Ltd		1054.994	774.078
47	JSW Steel Ltd		3017.776	1691.502
48	Uttam galva Steel Ltd		385.936	109.402

**Industry wise Correlation between OCF and PAT
(on the basis of average value of each sector of each year)**

OCF and PAT of Indian Corporate Sector

Corporate Sector	2012	2011	2010	2009	2008	Average	CV	Correlation
Automobile								
OCF	2,396.41	2,006.64	2,928.76	1,008.62	1,788.43	2,025.77	0.35	0.7354
PAT	1,905.66	1,860.49	1,639.06	854.21	963.33	1,444.55	0.35	
Cement								
OCF	1,016.00	618.00	508.00	538.00	578.00	651.00	0.32	0.7921
PAT	539.00	259.00	341.00	335.00	419.00	378.00	0.28	
Power								
OCF	1,119.00	1,297.00	1,708.00	1,131.00	771.00	1,205.00	0.28	-0.4173
PAT	1,108.00	596.00	385.00	552.00	612.00	587.00	0.42	
FMCG								
OCF	1,271.00	1,074.00	992.00	721.00	851.00	982.00	0.21	0.9511
PAT	1,283.00	1,037.00	898.00	721.00	661.00	920.00	0.27	
PHARMA								
OCF	356.00	239.00	221.00	86.00	140.00	208.00	0.49	0.5662
PAT	256.00	331.00	217.00	201.00	154.00	205.00	0.29	
IT								
OCF	1,545.00	1,673.00	2,037.00	1,690.00	1,293.00	1,648.00	0.16	0.0552
PAT	3,254.00	2,818.00	1,917.00	1,961.00	1,478.00	2,192.00	0.32	
Textile								
OCF	392.00	337.00	452.00	531.00	459.00	434.00	0.17	0.3035
PAT	202.00	314.00	389.00	303.00	391.00	320.00	0.24	
Steel								
OCF	3,332.00	2,679.00	3,239.00	3,548.00	3,362.00	3,232.00	0.10	-0.2976
PAT	2,626.00	2,569.00	2,395.00	2,445.00	2,551.00	2,517.00	0.04	

IFRS 9 (2014): A CRITICAL ANALYSIS OF EXPECTED CREDIT LOSSES IMPAIRMENT MODEL

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ABSTRACT

This paper aims to discuss the current revision made to IFRS 9, what was the cause for such a change and its usefulness to financial statement users. IFRS 9 extends the use of fair value accounting and it has been under deep scrutiny because of its alleged role in the financial crisis. Therefore, the usefulness of fair value accounting is a key issue for standard setting purpose. An expected loss impairment model is added to IFRS 9 which will demand the use of different information and data to measure loan loss allowances compared to IAS 39. The project to replace IAS 39 has been taken in stages. This paper delineates the background for expected loss model in IFRS 9, how to estimate the expected credit impairment loss, the disclosure requirements and the views of some leading professionals on the issue.

The new standard is likely to provide better transparency on a company's credit risk and provisioning process though it could be a challenge for auditors, banks and regulators.

Key words: IFRS (International financial reporting standards), IASB (International Accounting standards Board), Fair value accounting, FVTPL (Fair value through profit or loss), FVTOCI (Fair value through other comprehensive income), ECL (Expected credit losses)

INTRODUCTION

IAS 39 has been considered very complex and difficult to apply in countries, thus various accounting bodies urged the International Accounting Standards Board (IASB) to come out with reduced complexity of the accounting standards for financial instrument and provide a single set of high quality standard, therefore IASB in 2010 had come up with IFRS 9 as a replacement to International Accounting Standard (IAS) 39.

The IASB first issued IFRS 9 in 2009 with a new classification and measurement model for financial assets followed by requirements for financial liabilities and derecognition

added in 2010. Subsequently IFRS 9 was amended in 2013 to add the new general hedge accounting requirements. The final version of IFRS 9 issued in July 2014 supersedes all those previous versions although they remain available for early adoption for a limited time. IFRS 9 (2014) incorporates the final requirements on all three phases of the financial instruments projects- classification and, measurement, impairment and hedge accounting.

Almost five years after the publication of the first phase of the replacement of IAS 39, the IASB completed its project to improve accounting for financial instruments by adding a **new expected credit loss model** for the recognition of impairment.

IFRS 9 (2014) adds to the existing IFRS 9:

- New impairment requirements on all financial assets that are not measured at fair value through profit or loss.
- Amendments to the previously finalized classification and measurement requirements.

IFRS 9, Financial Instruments is the final part of IASB's response to the financial crisis, which includes a forward-looking 'expected loss' impairment model and a substantially-reformed approach to hedge accounting as key elements in a single, integrated standard. It is designed to address concerns which emerged following the global financial crisis when banks were unable to account for losses until they were incurred, even when it was apparent to them that they were going to experience those losses.

IASB says IFRS 9 provides a logical, single classification and measurement approach for financial assets that reflect the business model in which they are managed and their cash flow characteristics. It includes a forward-looking expected credit loss model which IASB says will result in more timely recognition of loan losses and is a single model that is applicable to all financial instruments subject to impairment accounting, thus reducing complexity. The IASB has already announced its intention to create a transition resource group to support stakeholders in the transition to the new impairment requirements. In addition, IFRS 9 addresses the so-called 'own credit' issue, whereby banks and others book gains through profit or loss as a result of the value of their own debt falling due to a decrease in credit worthiness when they have elected to measure that debt at fair value.

Limitation of Incurred Loss Impairment Model

Accounting standards around the world are currently based upon incurred loss model. Under Incurred loss model, Impairment was only recognized just before a loan defaulted and it was designed to limit management's ability to create hidden reserves during the good times that could be used to flatter earnings during the bad times which was misleading to investors.

However, during this most recent crisis the model has been accused of resulting in impairment being 'too little, too late'. During the recent crisis the existing model was, in many cases, applied so that impairment was only recognized just before a loan

defaulted. This meant that the loan losses were often recognized too late because of which many investors lost trust in Bank's balance sheet.

IFRS 9: New 'Expected loss' Impairment Model

IFRS 9 (2014) is applied to:

- Debt instruments held measured at amortized cost or FVTOCI
- Written loan commitments and written financial guarantee contracts
- Lease receivables within the scope of IAS 17 Leases, and
- Contract assets within the scope of IFRS 15 Revenue from contracts with customers.

The new forward looking model contains three stages:

Stage 1: Expected losses arising from an event occurring within the next 12 months are provided.

It includes financial instruments that have not had a significant increase in credit risk since initial recognition or which have low credit risk at the reporting date. For these items, 12-month ECL are recognized and interest revenue is calculated on the gross carrying amount of the asset (i.e., without deduction for credit allowance). The 12-months ECL are the expected credit losses that result from default events that are possible within 12 months after the reporting date. It is not the expected cash shortfalls over the 12 month period but the entire credit loss on an asset weighted by the probability that the loss will occur in the next 12 months.

Stage 2: Life time expected losses are recognized, with interest revenue being recognized on the gross carrying amount.

It includes financial instruments that have had a significant increase in credit risk since initial recognition (unless they have low credit risk at the reporting date) but that do not have objective evidence of impairment. For these items, lifetime expected credit losses are recognized, but interest revenue is still calculated on the gross carrying amount of the asset. Lifetime ECL is an expected present value measure of losses that arise on default throughout the life of the instrument. It is the weighted average credit losses with the probability of default as the weight.

Stage 3: Life time expected losses are recognized, with the object of impairment.

It includes financial assets that have objective evidence of impairment at the reporting date. For these items, lifetime expected credit losses are recognized and interest revenue is calculated on the net carrying amount (i.e. net of credit allowance).

The new standard moves from an incurred loss model to an expected loss model, marking a big change for banks, insurance companies and the users of financial statements. For the first time, banks will have to recognize not only credit losses that have already occurred but also losses that are expected in the future. This is designed to help ensure that they are appropriately capitalized for the loans that they have written.

Concerns about impairment came under the spotlight during the financial crisis because banks were unable to book accounting losses until they were incurred, even though they could see the losses coming. At times the incurred loss rule meant banks overstated profits upfront and did not make prudent provisions against expected losses, particularly in areas such as the loans they secured against real estate.

The ECL model relies on a relative assessment of credit risk; this means that a loan with the same characteristics could be included in Stage 1 for one entity and in Stage 2 for another depending on credit risk at initial recognition for each entity. Moreover, an entity could have different loans with the same counterparty that could be included in different stages depending on the credit risk that each one had at origination.

Possible impact on the following sectors

The changes are likely to have a significant impact on the following entities:

- Banks (Expected for credit systems and processes)
- Insurance companies
- Leasing Companies
- Corporates (Trade Receivables)

Exploring the general model: assessing a significant increase in credit risk

1. When assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, management looks at the change in the risk of a default occurring over the expected life of the financial instrument rather than the change in the ECL. An entity should compare the risk of a default as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. If management chooses to make the assessment by using PD, generally a lifetime PD (over the remaining life of the instrument) should be used. However, as a practical expedient, a 12-month PD can be used if it is not expected to give a different result to using lifetime PDs.
2. When determining whether the credit risk on an instrument has increased significantly, management should consider reasonable and supportable best information available without undue cost or effort. This information should include actual and expected changes in external market indicators, internal factors and borrower-specific information.

Examples of ways in which the assessment of significant increases in credit risk could be implemented more simply include:

- Establishing the initial maximum credit risk for a particular portfolio by product type and/or region (the 'origination credit risk') and comparing that to the credit risk at

the reporting date. This would only be possible for portfolios of financial instruments with similar credit risk on initial recognition;

- Assessing increases in credit risk through a counterparty assessment, as long as such assessment achieves the objectives of the proposed model; and
 - An actual or expected significant change in the financial instrument's external credit rating.
3. Generally a financial instrument would have a significant increase in credit risk before there is objective evidence of impairment or before a default occurs. The standard requires both forward-looking and historical information to be used in order to determine whether a significant increase in credit risk has occurred.
 4. Lifetime ECL are expected to be recognized before a financial asset becomes delinquent. If forward-looking information is reasonably available, an entity cannot rely solely on delinquency information when determining whether credit risk has increased significantly since initial recognition; it also needs to consider the forward-looking information. However, if information that is more forward-looking than past due status is not available, there is a rebuttable presumption that credit risk has increased significantly since initial recognition no later than when contractual payments are more than 30 days past due.
 5. This presumption can be rebutted if there is reasonable and supportable evidence that, regardless of the past-due status, there has been no significant increase in the credit risk: For example, where non-payment is an administrative oversight, instead of resulting from financial difficulty of the borrower. Another example is where management has access to historical evidence that demonstrates that there is no correlation between significant increases in the risk of a default occurring and financial assets on which payments are more than 30 days past due, but that evidence does identify such a correlation when payments are more than 60 days past due.
 6. Generally, a significant increase in credit risk happens gradually over time and before the financial asset becomes credit-impaired or is in default. As a result, the lifetime ECL should not be delayed and is recognized before a financial asset is regarded as credit-impaired or in default.

Estimating expected credit losses

A credit loss is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that the entity expects to receive discounted at the original effective interest rate.

This calculation of lifetime ECL could be challenging, as IFRS 9 requires entities to take into account all information that is reasonably available, including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions when performing the assessment. Therefore, the

calculation of the impairment provision will require a significant amount of judgment especially with regards to how to incorporate forward looking information in the measurement.

IFRS 9 establishes that for periods beyond 'reasonable and supportable forecasts' an entity should consider how best to reflect its expectations by considering information at the reporting date about the current conditions, as well as forecasts of future events and economic conditions. As the forecast horizon increases, the availability of detailed information decreases and the degree of judgment to estimate ECL increases.

The estimate of ECL does not require a detailed estimate for periods that are far in the future – for such periods, an entity may extrapolate projections from available, detailed information. The standard is not specific on how to extrapolate projections from available information. Different ways of extrapolating may be used; an entity could apply the average expected credit losses over the remaining period or use a steady rate of expected credit losses based on the last available forecast. These are only examples and other methods might apply. This is a highly judgmental area which may have a big impact on the allowance for impairment.

As a result, the value of the allowance for impairment will vary depending on the movements in the projections and on the relative credit quality of the financial instruments. It is therefore expected that this will generate more volatility in the P&L than the current IAS 39 incurred loss model. Nevertheless this volatility should be more aligned to the information contained in credit risk management systems of financial institutions.

In short, while calculating ECL following information needs to be considered:

- An unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- The time value of money; and
- Reasonable and supportable information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date.

MEASUREMENT AND PRESENTATION OF ECL

The following action needs to be considered while measuring ECL:

- Perform comprehensive review of financial assets to ensure that they are appropriately classified and measured.
- Decide how to apply the expected credit loss model to different Financial Assets.
- Develop impairment methodologies and controls to ensure judgment is exercised consistently and supported by appropriate evidence.

The calculation for the lifetime ECL and 12 months ECL is as follows:

Lifetime ECL = Present value of all cash shortfalls expected over the remaining life of financial instrument.

- [PD(year1) x LGD + PD(year 2) x LGD + ... + PD(last year) x LGD]

12-month ECL= the portion of lifetime ECL associated with probability of a default occurring in next 12 months after reporting date.

- PD(year1) x LGD(year1)

Where PD = Probability of default and LGD = Loss governing default.

Presentation in Financial Statement

- Management should present **interest revenue** in the statement of comprehensive income as a separate line item. Impairment losses (including reversals of impairment losses or impairment gains) should also be presented as a separate line item.
- An entity should recognize ECL in the statement of financial position as:
- A **loss allowance** for financial assets measured at amortized cost and lease receivables; and
- A **provision** (that is, a liability) for loan commitments and financial guarantee contracts.
- For financial assets that are mandatorily measured at fair value through other comprehensive income, the accumulated impairment amount is not separately presented in the statement of financial position. However, an entity should disclose the loss allowance in the notes to the financial statements.

New Disclosure Requirements

Sufficient information should be provided to allow users to reconcile line items that are presented in the statement of financial position. For disclosure purposes, financial instruments should be grouped into classes that facilitate the understanding for users. The information should also be provided on the same level of aggregation or disaggregation as the reconciliation of the related loss allowance and shall include relevant qualitative and quantitative information.

It is expected that in order to comply with the new disclosure requirements entities will need to modify their current information systems in order to gather and track the data required (i.e., credit risk of the financial asset at inception). Example of key disclosure requirements are presented below:

QUANTITATIVE	QUALITATIVE
Reconciliation of opening to closing amounts of loss allowance showing key drivers of change	Inputs, assumptions and estimation techniques for estimating ECL.
Reconciliation of opening to closing amounts of gross carrying amounts showing key drivers of change	Inputs, assumptions and estimation techniques to determine significant increases in credit risk and default.
Gross carrying amounts by credit risk grade	Inputs, assumptions and techniques to determine credit-impaired assets
Write offs, recoveries and modifications	Write off policies, modi. policies, collateral

Views of some Leading Professionals

- Andrew Spooner, lead financial instruments partner at Deloitte, said: 'The new standard on financial instruments will affect all sectors though the introduction of an expected loss model for loan loss provisioning, but will impact banks most. 'Banks have told us they expect provisions will increase, on average, by 50% on adoption. IFRS 9 should give investors better insight into the credit quality of all financial assets, not just those that are considered "bad".' The changes will reduce profits in the first year of implementation, but this is likely to have only a short-term impact on income statements. However, IFRS 9 will increase running costs for banks and financial institutions.
- Chris Spall, KPMG's global IFRS financial instruments leader, said: "The new standard is going to have a massive impact on how banks account for credit losses on their loan portfolios. Provisions for bad debts will be bigger and are likely to be more volatile. And after long debate about this complex area, it is good that we finally have a complete standard and that the implementation effort can begin in earnest,"
- Colin Martin, head of KPMG UK assurance services, banking, said: "Adopting the new rules is going to mean a lot of time, effort and money for banks and a major issue for banks and investors in banks will be how adoption of the new standard will affect regulatory capital ratios. Banks will need to factor this into their capital planning and we expect that users will be looking for information on the expected capital impacts."
- Hans Hoogervorst, IASB chairman, said: "The reforms introduced by IFRS 9 are much needed improvements to the reporting of financial instruments and are consistent with requests from the G20, the Financial Stability Board and others for a forward-looking approach to loan-loss provisioning."
- Joachim Kölschbach, KPMG's global IFRS insurance leader, said: "Insurers have to plan for adopting new standards on both financial instruments and insurance contracts over the next few years. The overall effect cannot be assessed until the insurance standard is finalised over the next 12 months, but we can expect a sea-change in financial reporting for most insurers."
- Jessica Taurae, Global Accounting Consulting Services Partner, said: "The new classification requirements are not likely to have a big impact but the new impairment provisions could require some work. IFRS 9 requires entities to calculate the impairment allowance on trade receivables based on the losses they expect to have during the life of the instrument. That means that an entity needs to compare the present value of the cash flows based on the contract to the present value of the cash flows that the entity expects to receive. So if the entity expects to be paid later than when the cash is contractually due, an impairment loss is recognized, even if the entity expects to be paid in full."

- Lain Coke, head of ICAEW’s financial services faculty, said: ‘It is important to remember that this accounting change will not change the cash flows of underlying loans. ‘However, when combined with tougher regulatory capital requirements, it may force banks to hold more capital for the same risks. This may make banks safer but may also make them more costly to run.’
- Nigel Sleigh-Johnson, head of the financial reporting faculty at ICAEW, the UK accountancy body, said: “While, importantly, both boards have moved from an incurred loss model to an expected loss one, it’s not an ideal outcome for such a significant sector in such a significant area of accounting. Investors will have to understand sets of accounts prepared under both regimes, and it will be harder for investors to benchmark.”
- Spooner said: “When you have more judgment, there is potential for greater variability and there is a potential lack of comparability as the prospects for the future are assessed differently by different institutions.”
- Tony Clifford, partner at EY, said: 'The impairment requirements in the new standard are going to be based on an expected credit loss model and replace the IAS 39 incurred loss model. This has the potential to impact the capital requirements of banks and may also make it harder to compare the reported results of different entities.

CASE STUDY

A bank makes a five-year loan of Rs 1,000,000 to Company A in the last quarter of 2018. The bank makes an initial credit assessment consistent with the economics of the lending decision.

As long as a loan is performing as expected when money was first lent, no credit loss is suffered economically, so IFRS 9 requires a portion of lifetime expected credit losses to be recognised (12-month expected credit losses).

In this instance, the bank assesses that there has been no change in the credit risk – ie the risk of a default occurring – since initial recognition. The bank estimates the loan loss allowance based on 12-month expected credit losses to be Rs 1,250.

A year later, at December 31 2019, the bank assesses the credit risk over the life of the loan based on currency conditions and relevant forecast conditions over the remaining life of the loan. While the loan is currently performing, the bank determines that the credit risk on the loan – the likelihood of it defaulting – has increased significantly.

When a loan’s credit risk increases significantly from the initial expectations the lender is no longer being compensated for the losses to which it is exposed and so IFRS 9 requires lifetime expected credit losses to be recognised. The bank estimates that at December 31 2019 the lifetime expected credit losses for the loan are Rs 9,000.

Previous IFRS (IAS 39)

- Impairment of financial assets is recognized on an incurred loss basis, which requires objective evidence of likely impairment before a provision can be made.
- At December 31 2018, there is no objective evidence of impairment, hence no provision is made.
- At December 31 2019, the bank continues to recognize the loan at Rs 1,000,000 because there is still no objective evidence of impairment that has an impact on the estimated future cash flows of the financial asset, even though the risk of impairment has increased significantly.

New requirements (IFRS 9 – 2014)

- Impairment of financial assets is recognized on an expected credit loss basis, which requires historic, current and forecast information to be considered in determining the loss allowance.
- At December 31 2018, the bank recognizes a loss allowance at an amount equal to 12-month expected credit losses of Rs 1,250. The bank recognizes an impairment loss of Rs 1,250 in profit or loss.
- At December 31 2019, the bank has assessed that the credit risk of the loan has increased significantly since initial recognition and therefore recognizes a loss allowance of an amount equal to lifetime expected credit losses. The bank recognizes an additional impairment loss of Rs 7,750 (or Rs 9,000-Rs 1,250) in profit or loss accordingly.

CONCLUSION

By this change the banks and insurance companies that hold large portfolios of loans on their books are most affected. Banks will face the cost of updating their systems and processes to move from calculating incurred loss to expected loss.

The new standard is likely to provide better transparency on a company's credit risk and provisioning process but it introduces a greater degree of subjectivity because it is more forward looking. One challenge for auditors, banks and regulators is that banks could have different valuations of collateral and different treatments of trigger events that resulted in an expected loss.

Advantages of this Model

- Realistic recognition of impairments.
- Good for investors as they can have a true picture.
- Good for Economy as credit will stop flowing to Zombie Companies and the resources are freed up for companies that do have a future.

Implementation Challenges

- Very challenging, in particular for financial institutions as most entities do not collect the amount of credit information required by the standard.
- Management will need to build new models to determine both 12-month and lifetime ECL. This will require complex judgments (for example, definition of default, definition of low credit risk and behavioral life of revolving credit facilities).

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UTILITY AND CRITICISMS OF HUMAN RESOURCE ACCOUNTING

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ABSTRACT

The present paper seeks to explain the perceptions of respondents regarding utility and criticisms of human resources. Sample respondent managers, executives and non-executives constituted the main source of information which was collected by administering a structured questionnaire. 120 respondents were selected from each department of finance, accounting, human resource development and other departments constituted the 360 respondents. The SPSS 17.0 version was used to interpret and analyze data by adopting the cross tab with age, mean values and percentage. The human resource accounting was useful to all the stakeholders of an organization, investors internal as well as external decision makers. But it was more useful to the internal management decision making of an organization. The study also revealed that the human resource accounting information was more useful to internal management to take various internal decisions followed by employees and trade unions and the least useful to creditors and lenders. Human resource accounting is most useful in employee motivation and the least useful in decision making relating to business operations.

Key Words: Human Resource Accounting, Human Resource Development, Employee Motivation

INTRODUCTION

Human resources of an organization are indispensable and considered a more valuable resource as compared to with tangible and intangible assets. People are obviously a vital asset and even technology does not replace people. Human resource accounting mainly belongs to measuring the different aspects of human assets. The primary objective of Human Resource Accounting is to make possible the effective management of human resources by providing information to acquire, develop, retain, utilize and evaluate human resources. Human resource accounting has emerged as a new academic branch of accounting. With the passage of time, the concept and definitions of human resource accounting got redefined and it is accepted that this new accounting discipline helps the external users also and therefore it works like a full proof of accounting

system. Thus the idea of human resource accounting further developed. The American Accounting Association in its report published in 1966, defined accounting as the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information. Human resources must perform the following four functions: Identification of human resources as an asset, measuring the human resource value, recording its particulars in the books of accounts and presenting and communicating the information to the decision makers. After due consideration of various views of human resource accounting, it has been identified as an important and promising area of research in the second half of the last century.

Concept of Human Resource Accounting

The Institute for Social Research University of Michigan first used the term human asset in the late 1950s. It has now been replaced by human resources. Accounting for people as an organizational resource is called human resource accounting. It involves measuring the costs incurred by business firms and other organizations to recruit, select, hire, train and develop the human asset. It involves measuring the economic value of people to the organizations. In this regard it is better to take into account one more definition of HRA which given by Mr. Wood Sulf "Human Resource Accounting is an attempt to identify and report investments made in human resources of an organization that are presently not accounted for in conventional system that tells the management what changes over time occurring to the human resources of business".

OBJECTIVES OF THE STUDY

The study has been carried out with the following specific objectives.

- To interpret and analyze the perceptions of respondents regarding utility and criticisms of Human Resource Accounting.
- To offer suitable suggestions to adopt the human resource accounting practice in Visakhapatnam Steel Plant.

METHODOLOGY OF THE STUDY

Sample respondent managers, executives and non-executives constituted the main source of information, which were collected by administering a structured questionnaire. 120 respondents were selected from each department of accounting and finance, human resource development and other departments amounted to 360 respondents. The secondary data has been collected from administrative records, annual reports, management reports, organization training manual, journals and special project reports. Besides that, data was collected from various books and magazines from libraries.

Techniques of Analysis and Interpretation: The SPSS (Statistical Package for Social Sciences) 17.0 version was used to interpret and analyze the data, by applying the following techniques. Cross Tab with Age and, descriptive Statistics.

Perceptions of the Respondents

In today's world of competition and free economy, in spite of having identical physical and financial resources, business can only endure and grow on the basis of skills, technologists and managing capacity of the people. In the absence of such strategic people, growth of business cannot be thought of employees provide benefits to the business in the same manner as the other tangible and intangible resources, with the emergence of service and knowledge based economy, people now largely accept that in the new economy the prosperity of an organization is significantly influenced by its employees.

Human resources have attributed different from other physical assets, which make them special and vital. In last forty years a debate on the idea to have a well developed established accounting system, which helps to identify, measure and communicate the information related to human resources of an organization taken place. But a number of behavioral scientists and professionals have raised questions against the validity and practicability of the concept. It has been discussed that human resource accounting is not accepted and implemented even after forty years of its birth. In view of this in this section of the questionnaire efforts have been made to identify the difficulties in the establishment of human resource accounting as a well accepted system. In this section questions have been raised to check the views of respondents on the introduction of human resource accounting. The perceptions of the respondents are presented here as follows.

Table 1: Respondents' Opinion on Possibility of Introduction of Human Resource Accounting

Possibility of Introduction of HR Accounting	Age				Total
	21 – 30	31 – 40	41 – 50	51 & Above	
Yes	20 (5.6)	36 (10.0)	121 (33.6)	89 (24.7)	266 (73.9)
No	0 (.0)	2 (.6)	19 (5.3)	15 (4.2)	36 (10.0)
Not Respondent	12 (3.3)	12 (3.3)	14 (3.9)	20 (5.6)	58 (16.1)
Total	32 (8.9)	50 (13.9)	154 (42.8)	124 (34.4)	360 (100.0)

Source: Field Study

Note: per cent of the respondents are indicating in parenthesis

The inference that one can draw from the above table, human resources accounting can be introduced, as 73.9 per cent of the respondents expressed their agreement on it, where as 16.1 per cent of the respondents did not give their opinion regarding this

issue, but 10 per cent of the respondents expressed that “the possibility of a introduction of human resource accounting was not possible.” Finally, it can be concluded that, the most of the respondents expressed their opinion, that introduction of human resource accounting is possible at all levels of management.

Table 2: Respondents Opinion on Utility of Human Resource Accounting Information to the Different Users

Utility of HRA Information	Mean Value	S.A	A	N	D	SD
Investors	2.02	62 (17.2)	240 (66.7)	46 (12.8)	12 (3.3)	-
Internal Management Decision Making	1.62	162 (45)	172 (47.8)	26 (7.2)	-	-
External Management Decision Making	2.15	55 (15.3)	217 (60.3)	67 (18.6)	21 (5.8)	-
Over all Mean	(1.93)					

Source: Field Study

SA – Strongly Agree; A = Agree; N = Neither Agree nor Disagree; D = Disagree; SD =- Strongly Disagree

Note: per cent of the respondents are indicating in parenthesis

Even though majority of the respondents agreed that human resource accounting was useful to all the stakeholders of an organization -investors, internal as well as external management decision makers, the most of the respondents (92.8 per cent) opined that human resource accounting was more useful to the internal management decision making of an organization, the statistical expression of the same in terms of mean value which was calculated at 1.62 express the strong agreement of the respondents.

Table 3: Respondents’ Opinion on Help of Human Resources Accounting to Different Users (n=360)

S. No.	Help of Human Resource Accounting	Mean value	S.A.	A	N	D	S.D
01.	Investors / Share Holders	2.07	84 (23.3)	204 (56.7)	44 (12.2)	20 (5.6)	8 (2.2)
02.	Creditors and Lenders	2.27	76 (21.1)	134 (37.2)	134 (37.2)	10 (2.8)	6 (1.7)
03.	Employees and Trade Unions	1.71	182 (50.6)	112 (31.1)	56 (15.6)	8 (2.2)	2 (.6)
04	Internal Management in Decision Making	1.66	186 (51.7)	116 (32.2)	54 (15)	2 (.6)	2 (.6)
	Overall mean	1.92					

SA = Strongly Agree; A = Agree; N = Neither Agree nor Disagree; D = Disagree;

SD = Strongly Disagree

Note: per cent of the respondents are indicating in parenthesis

The foregoing analysis can be summed up as follows. The study reveals that the human resource accounting information was more useful to internal management to take various internal decisions (mean value 1.66), followed by employees and trade unions (mean value 1.71) and in the external users, respondents found that human resource accounting information was least useful to creditors and lenders (with mean value 2.83 which was greater than that of over all mean of 1.92). Hence, it can be concluded that management should take necessary steps to see the human resource accounting information is also useful to external users like investors, creditors and lenders.

Table 4: Respondents Opinion on Various Kinds of Decisions Where Human Resource Accounting Helps In Decision Making

S. No.	Opinion on Various Kinds of Decisions	Mean	S.A.	A	N	D	S.D
01.	Employee Motivation	1.44	222 (61.7)	120 (33.3)	14 (13.9)	4 (1.1)	-
02.	Improving Efficiency of an Employee	1.49	206 (57.2)	134 (37.2)	16 (4.4)	4 (1.1)	-
03.	Man Power Planning	1.63	192 (53.3)	124 (34.4)	32 (8.9)	10 (2.8)	2 (0.6)
04	Controlling Man power Turnover	1.71	186 (51.7)	116 (32.2)	38 (10.6)	18 (5.0)	2 (0.6)
05.	Resolve Employee Management Conflicts	1.75	171 (47.5)	127 (35.3)	42 (11.7)	20 (5.6)	-
06.	Image Building of an Organisation	1.88	101 (28.1)	205 (56.9)	49 (13.6)	5 (1.4)	-
07.	Decision Making Relating to Investments in Business	2.14	69 (19.2)	211 (58.6)	44 (12.2)	32 (8.9)	4 (1.1)
08	Decision Making Relating to the Business Operations	2.32	54 (15)	172 (47.8)	104 (28.9)	24 (6.7)	6 (1.7)
09	Improving Loyalty of an Employee	2.06	112 (31.1)	124 (34.4)	116 (32.2)	8 (2.2)	-
	Overall mean	1.82					

Source: Field Study

SA = Strongly Agree; A = Agree; N = Neither Agree nor Disagree; D = Disagree;

SD = Strongly Disagree

Note: per cent of the respondents are indicating in parenthesis

The mean value of all the variables required information for human resource accounting decision making varied between 1.50 and 2.47. The result of the survey suggests that the respondents agreed all variables. According to the view of respondents there was a high degree of agreement amounting to the mean value varied from 1.50 to 1.66 with reference to three variables, namely employees experience index (1.50), employees education index (1.61) and human resources training and development programme of the organization (1.66). The frequency distribution in percentage of the total responses also represented the same results with the extent of agreement at 92.8 per cent. 87.8

UTILITY AND CRITICISMS OF HUMAN RESOURCE ACCOUNTING

per cent and 86.1 per cent for each of variable. Thus, in the decision making process, information related to employees experience Index, employees' education index and human resource training and development of the organization were identified as most useful by the respondents. Respondents have given due importance to the information related to the employees turnover (87.2 per cent), human resource value in monetary terms (71.1 per cent) and in non monetary terms (72.2 per cent).

Table 5: Respondents Opinion on Criticisms of Human Resource Accounting

S. No.	Criticisms of HRA	Mean	S.A.	A	N	D	S.D
01.	Employees may make irrational demands	2.47	68 (18.9)	162 (45.0)	52 (14.4)	50 (13.9)	28 (7.8)
02.	It is just wastage of energy and resources	3.36	48 (13.3)	42 (11.7)	46 (12.8)	182 (50.6)	42 (11.7)
03.	Appropriate Accounting tools are not available	2.57	48 (13.3)	170 (47.2)	64 (17.8)	46 (12.8)	32 (8.9)
04	The people are not owned by the organization like other physical properties	2.46	62 (17.2)	168 (46.7)	46 (12.8)	72 (20.0)	12 (3.3)
05.	The Human Resource Accounting is that it may not be recognized by tax laws.	2.34	46 (12.8)	190 (52.8)	84 (23.3)	36 (10.0)	4 (1.1)
06.	Conventional treatment of investments on Human resources may lead to the erosion of investors interest	2.86	34 (9.4)	110 (30.6)	96 (26.7)	114 (31.7)	6 (1.7)
07.	Expenses incurred by a firm on recruitment training and development of employees are treated as current costs and written off against current revenue	2.46	58 (16.1)	144 (40.0)	98 (27.2)	54 (15.0)	6 (1.7)
08	Typical balance sheet of any business organization does not disclose human assets	2.37	58 (16.1)	166 (46.1)	84 (23.3)	48 (13.3)	4 (1.1)
09	Human resources deteriorated in terms of its efficiency and productivity.	2.26	96 (26.7)	132 (36.7)	92 (25.6)	24 (6.7)	16 ((4.4))
	Overall mean	2.57					

Source: Field Study

SA = Strongly Agree; A = Agree; N = Neither Agree nor Disagree; D = Disagree;

SD = Strongly Disagree

Note: per cent of the respondents are indicating in parenthesis

Employees may make Irrational Demands

It can be seen from the table, that 18.9 per cent of the respondents strongly agreed that, employees may make irrational demands after inception of human resource

accounting in organization, because of they may be know the human resource value per employee in a significant manner. 45 per cent of the respondents were also agreed on this issue. 14.4 per cent of the respondents remained silent on this issue, whereas around 14 per cent of the respondents disagreed and 7.8 per cent of the respondents strongly disagreed about this issue. The calculated value of mean was 2.47 (overall mean 2.57) and it leads to conclusion that the employees may make irrational demands to get a proportionate profit in the overall profit of an organization.

Wastage of Energy and Resources

It is surprising to note that around 51 per cent (half - of) the respondents disagreed regarding human resourcing accounting is a just wastage of energy and resources, they explained that human resource accounting was useful to know human resource value per employee, use of various assets with more efficiency etc., and also only 11.7 per cent of the respondents strongly disagreed regarding this issue. 12.8 per cent of the respondents have been silent about this issue, where as only a negligible portion of (13.3 per cent) the respondents strongly agreed and 11.7 per cent of respondents agreed on this issue. The calculated value of mean was 3.36 (overall mean 2.57). On the whole, it can be concluded that inception of human resource accounting is not just wastage of energy and resources.

Appropriate Accounting Tools are not available

This statement was supported by the 13.3 per cent of the respondents who strongly agreed, and opined that there were no appropriate accounting tools to measure and assess the value of human resources, and 47.2 per cent of the respondents agreed regarding this view, where as about 18 per cent of the respondents neither agreed nor disagreed about this issue and only a negligible portion (12.8 per cent) of the respondents disagreed with reference to this view, but only a meager portion (8.9 per cent) of the respondents were strongly disagreed. The calculated value of mean was 2.57 (overall mean 2.57). Finally, it can be concluded that appropriate accounting tools are not available to measure and disclose the value of human resources at a significant manner.

People are not owned by the Organization

It can be seen from the table that 17.2 per cent of the respondents strongly agreed that the people are not owned by the organization like other physical properties, besides that 46.7 per cent of the respondents agreed regarding that opinion. Whereas 20 per cent of the respondents disagreed about this issue, and also a 3.3 per cent of the respondents were strongly disagreed about this issue, but 12.8 per cent of respondents neither agreed nor disagreed about this issue. The value of mean 2.46 (overall mean 2.57). So it can be inferred that majority of the respondents have expressed their opinion that the people are not owned by the organization just like other physical assets, fixed assets, machinery plants.

May not be recognized by the Tax Laws

The above table makes it clear that 52.8 per cent of the respondents agreed regarding above statement in addition to them, 12.8 per cent of the respondents strongly agreed that the subject of human resource accounting is may not be recognized by tax laws, therefore it may not be seems to other subjects 23.3 per cent of the respondents neither agreed nor disagreed about this issue, 10 per cent of respondents disagreed, and only a 1.1 per cent of the respondents strongly disagreed about this issue. The value of mean was 2.34 (overall mean 2.57) which leads us to conclude that human resource accounting may not be recognized by the tax laws. Hence, the management and statutory bodies should take necessary steps to recognize the human resource accounting by various tax laws.

Conventional Treatment of Investments on Human Resources may Lead to the Erosion of Investors Interest

It is surprising to note that majority of the respondents (31.7 per cent) disagreed that conventional treatment of investments on human resources may lead to the erosion of investors interest. While 26.7 per cent of the respondents neither agreed nor disagreed about this issue. And also there was 30.6 per cent of the respondents who agreed this issue, while 9.4 per cent of the respondents strongly agreed regarding this issue. The calculated value of mean was 2.86 (overall mean 2.57), which can be inferred that there is a mixed opinion regarding conventional treatment of investments on human resources may lead to the erosion of investor's interest.

Expenses Regarding Recruitment Training and Development of an Employees are Treated as Current Costs and Written off against Current Revenue

This statement was supported by the 56.1 per cent of the respondents, out of them 16.1 per cent of respondents strongly agreed, and 40 per cent of the respondents agreed about this issue. This issue conveys that expenses incurred by a firm on recruitment, training and development of employees are treated as current costs and written off against current revenue. 27.2 per cent of the respondents' silent about this issue. 15 per cent of the respondents disagreed, a small portion of the respondents (1.7) per cent of the respondents were strongly disagreed about this issue. The calculated value of mean was 2.46 (over all mean 2.57) which can be inferred that about half of the respondents were accepted that human resources costs can be written off against current revenue.

Typical Balance Sheet – Disclose of Human Assets

It is also interestingly to note that 16.1 per cent of the respondents strongly agreed that typical balance sheet of any business organization does not disclose human assets, this statement was also supported by the 46.1 (majority of respondents) per cent of the respondents. Whereas 23.3 per cent of the respondents have silent about this issue but 13.3 per cent of the respondents were disagreed regarding this issue, and only a 1.1 per

cent of the respondents strongly disagreed with reference to this issue. The calculated value of mean was 2.37, but overall mean was 2.57. Therefore, it can be concluded that the majority of the respondents expressed their opinion that typical balance sheet of an organization does not disclose human assets.

Human Resources Deteriorated in Terms of its Efficiency and Productivity

It is surprising to note that 26.7 per cent of the respondents, 36.7 per cent of the respondents strongly agreed and agreed respectively with reference to that human resources deteriorated in terms of its efficiency and productivity, where as 25.6 per cent of the respondents have been silent about this issue, but only 6.7 per cent of the respondents were disagreed and further 4.4 per cent of the respondents strongly disagreed about this issue. The calculated value of mean was 2.26 (overall mean 2.57). Thus, it can be concluded that a majority of the respondents expressed their opinion that human resources are deteriorated in terms of its efficiency and productivity.

In response to the main issue related to why human resource accounting is not much accepted, the respondents were favorable regarding these statements, employees may make irrational demands (2.47), appropriate accounting tools are not available (2.57), people are not owned by the organization like other physical properties (2.46), the human resource accounting is that it may not be recognized by tax laws (2.34), human resources costs are treated as current expenses written off against the current revenue (2.46), typical balance sheet of an organization does not disclose the human assets (2.37), human resources deteriorated in terms of its efficiency and productivity (2.26), where as the majority of respondents did not accept the following criticisms, conventional treatment of an investments on human resources may lead to the erosion of investors interest (2.86). Hence, it can be concluded that majority of the respondents accepted the most of the human resource accounting criticisms.

Table 6: Summarized View of Human Resource Accounting Parameters

S. No.	HRA Parameters	Overall Means score	Rank
01	Help of HRA to different users	1.93	2
02	Help of HRA to different uses	1.92	1
03	Criticism of Human Resource Accounting	2.57	3

Source: Field Study

MAJOR FINDINGS

The study found that introduction of human resource accounting system is possible at all levels of management of an organization. The study found that introduction of human resource accounting system is possible at all levels of management of an organization. The utility of human resource accounting has been reflected in the opinion of the respondents. They agreed that human resource accounting was useful to all the stakeholders of an organization, investors, and internal as well as external decision makers. But it was more useful to the internal management for decision making

of an organization. The study reveals that the human resource accounting information more useful to internal management to take various internal decisions, followed by employees and trade unions and the least useful to creditors and lenders. It has been realized that the respondents agreed that all the listed decision making variables are useful. But the most of the respondents have identified human resource accounting as the most useful in employee motivation and least useful in decision making relating to the business operations.

The study depicted that to measure the value of human resources one must consider the cost of training and development, cost of maintenance to keep employee continue with the organization. The training and development cost of human resources indicates highest favorableness of the respondents. This can be viewed as acceptance of importance of training and development cost in calculation of the human resource value.

In response to the main issue related as to why human resources accounting is not much accepted, the respondents favorable regarding these statements, employees may make irrational demands, appropriate accounting tools are not available, and people are not owned by the organization like other physical properties. Human resource accounting is that it may not be recognized by tax laws, human resource costs are treated as current expenses written off against the current revenue, typical balance sheet of an organization does not disclose.

CONCLUSION

The individual analysis of various parameters of human resource accounting is consolidated in table 6. In order to arrive at the overall ranking of all the parameters it may be noted that the human resource accounting was of help to the different uses, this option secured a first rank, followed by help of human resource accounting to different users, as per the respondents perception the least rank was given to the criticism of human resource accounting, It can, however be understood that there is still a lot of scope for the organization to improve and adopt the human resource accounting. Particularly in the areas of utility of human resource accounting to the different users and for external management decisions as well as internal management decisions.

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BRAND IMAGE OF THE COMPANY AND RISK-ADJUSTED PERFORMANCE OF INDIAN IPOS

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ABSTRACT

The historical patterns and news on IPOs says that investors are more attracted towards the IPOs of those companies which have good brand name in the market as compared to their peers. So from research point of view it becomes a point of curiosity that how branded companies live up to the expectations of investors. To answer this question we have done our research on the 183 IPOs launched in India from Jan-2007 to Sep 2011 and out of these 183 IPOs we have identifies 32 Branded companies based on certain parameters and we have compared their performance both at the time of listing and in long run. Our results show that IPOs with good brand name usually less underpriced at the time of listing and perform better in the long run. The reason for this behavior could be good fundamentals and fair pricing of the issues as there would not be any asymmetric information plaguing branded companies unlike unbranded companies. This may perhaps be the reason why investors become more interested in the branded companies IPOs though not much is left on the table.

Key Words: IPOs, Under pricing, CAAR

INTRODUCTION

There are many studies done in the field of measuring IPO performance. Some researchers worked on IPO under pricing, factors affecting IPO under pricing, reasons of IPO under pricing etc. Some researcher worked on short-term and long-term performance of IPOs. If we see the historical patterns and news on IPOs we would find that investors are more attracted towards the IPOs of those companies which have good brand name in the market as compared to their peers. So from research point of view it becomes a point of curiosity how branded companies live up to the expectations of investors. We have many such cases where investors actually lost their money for example in case of Reliance power IPO which came in February 2008 was 6 times

oversubscribed and later it crashed in stock market; same thing occurred in case of Facebook IPO, it was oversubscribed at the time of issue and crashed over 50% on listing. On the other hand some branded companies performed well on the first day of listing and thereafter.

Hence, there is a question in the mind of the investor whether there is any influence of brand name in the performance of IPO or it is just a myth. To answer this question we have done our research on the 183 IPOs launched in India from Jan-2007 to Sep 2011 and out of these 183 IPOs we have identifies 32 Branded companies based on certain parameters. We have compared the performance of 32 IPOs of branded companies with all the 183 companies both at the time of listing and in long run.

LITERATURE REVIEW

Ritter (1984) reports an 18.8% initial AR by considering 5000 plus IPOs arrived in the market between 1960 and 1982. Further studies by Ritter (1984), Beatty and Ritter (1986) and Rock (1986) depicted how under pricing of IPO can be explained by information asymmetry between informed and uninformed investors and to draw uninformed investors to participate under pricing is constructed to be the compensation offered by the IPO market. Aggarwal and Rivoli (1990) basing on a sample of 1598 IPOs issued in the US during 1977-1987 document an abnormal return of 13.73% for investor purchasing all IPOs in the open market at the close of the first trading day and holding each for a period of 250 trading days. The study reports some degree of under performance in the after-market.

Uhlir (1998) Shows that German IPOs underperformed the market by 7.14% (excluding first day returns) in their first year of trading. Madhusoodanan and Thiripalraju (1997), one of the earlier papers on Indian IPOs, states that under pricing in the initial public offerings (IPOs) is well documented phenomenon in the stock markets. In their paper, authors analyzed the performance of Indian IPOs after listing. They examined the impact of the issue size on the extent of under pricing in these offerings and the performance of merchant bankers in pricing the issues. Ghosh (2005), using 1842 IPOs in India's Bombay Stock Exchange during 1993 and 2001, also found that Indian IPOs under pricing is very high and concludes that listing delay and age of IPO firms explain the phenomenon of the under pricing. Jain and Padmavathi (2012) by using 227 book-built IPOs during the period March 2004 to August 2009 concludes that under pricing seen even in book building issue. The paper indicates that under pricing is the result of investors' willingness to get high return on opening, high subscription level and high firm value due to low pre-IPO leverage.

Agarwalla (2008) studied 110 Indian IPOs during 2002-05, to find that the extent of oversubscription significantly affected the level of under pricing and the post-IPO returns. Shaw (1995) studies the price movements during the public and rights issues

and his article opines that the price rigging before the issues would mislead and mis-allocates resources in the market. The article speaks about price rigging prior to the public issue done with the interest of the issuers to charge high premiums. Jain and Batra (1994) article expresses that leveraging brand strength, companies are charging hefty premiums on their stocks while tapping the primary market. In this process, fundamentals are being pushed to the background. The promoters may gain in the short run, but real test will be in the secondary market. Padode (1992) says that companies have to realize that once they came out with a very high premium and if it is not justified by the market the market would not accept any other issue from the same promoter. The article concludes that the public can 'fooled once', but not always. So the companies should come out with reasonable premium to attract the investors.

Sarma and Sastry (1996) estimates that in 1991-92, equity financing was 53.8 per cent of the total funds raised from the capital market, and 1.37 per cent being the capital, rose from premium issues. The situation has changed since 1992. The abolition of Controller of Capital Act, and the Securities and Exchange of Board of India's free pricing concept has led to an unprecedented shift in the primary market activity. The article states that since 1992, corporates have become interested in premium issues. Premium issues, which were just 1.37 percent in 1991-92, rose to 45.90 per cent in 1994-95. The article concludes that "The gambling instinct in investors -- to gain short-term gains from the primary market -- and the grabbing instinct of companies -- to get "riskless" funds without any cost -- may affect adversely the smooth functioning of the capital market."

OBJECTIVES OF STUDY

- To find out how the brand name of a company affects the under pricing of IPOs.
- To find out how the brand name of a company affect the long run performance of IPOs.

HYPOTHESIS

H0: There is no influence of brand name on the initial under pricing of IPOs

H1: Under pricing for IPOs with good brand name is less as compare to other IPOs

H0: There is no influence of brand on the long run performance of IPOs

H1: IPOs with good brand name perform better in long run as compare to other IPO

RESEARCH METHODOLOGY

Purpose of our study is to find out the influence of the brand name of a company on the under pricing of IPOs and there long run performance. To fulfill these two objectives we have selected 183 IPOs from Jan-2007 to Sep 2011 and out of these 183 IPOs we have Identified 32 Branded companies. These 32 companies selection was based primarily on two parameters which are a) number of years of establishment of the company and if

the company is new then number of years of establishment of parent company and b) market share of the company or its parent company. Further the sample thus selected was screened and refined based on expert opinions from stock brokers and investment consultants.

To fulfill the first objective we have calculated the market adjusted initial return of each company then we have calculated the mean adjusted return for all 183 companies and 32 branded companies and compare their value to see the difference by using t test.

$$\text{IPO initial return } (r_i) = (\text{Listing Price} - \text{Offer price}) / \text{Offer price}$$

Offer price is the price at IPO was subscribed in the primary market; listing price of IPO is the actual price at which the company listed in the secondary market for trading.

Same way we calculate the initial market return (r_m) and the initial market adjusted return is calculated as follow:

$$\text{Initial Market Adjusted Return } (\text{MAR}_j) = r_i - r_m \quad (1)$$

We have taken both Nifty-50 and BSE-SENSEX as proxies. Further we have calculated the mean adjusted return both for 183 companies as well as for 32 branded companies.

$$\text{Mean Adjusted Return} = \frac{\sum_{j=1}^n \text{MAR}_j}{n} \quad (2)$$

Where, n = no of IPOs.

To fulfill the second objective we have calculated the Cumulative average abnormal return (CAAR) for 1 year and for 2 year for all 183 set of companies and 32 branded companies to see their long run performance, then we compared their performance using t Test.

Cumulative Average Abnormal Return (CAAR)

Market-adjusted abnormal return (AR) of a company is the difference between the IPO firm's share return and the market return (return of market benchmark index) for that period.

$$\text{AR}_{i,t} = R_{i,t} - R_{m,t} \quad (3)$$

Where R_{it} is the return of the IPO firm i for the period t , and R_{mt} is the return of market benchmark index for period t .

Average Abnormal Return ($\text{AAR}_{i,t}$) is then calculated, which is the average of n companies for the period t .

$$\text{AAR}_{i,t} = \frac{1}{n} \sum_{i=1}^n \text{AR}_{i,t} \quad (4)$$

The cumulative average abnormal return of firm i from event month 1 to event month t is defined as follow:

$$\text{CAAR}_{i,t} = \sum_{i=1}^n \text{AAR}_{i,t} \quad (5)$$

If the CAAR is zero, it means there are no difference between the returns of the IPO firm and the benchmarks index. If CAAR is more than zero, it means IPO is over performing and if CAAR is less than zero, it means IPO is underperforming.

t Test

t test is used to test the null hypothesis that the sample mean (X) is equal to a population mean μ

$$t = \frac{X - \mu}{s / \sqrt{n}} \tag{6}$$

Where X is the sample mean and s is the sample standard deviation and n is the sample size. In our study sample is 32 branded companies and population is 183 companies because 32 branded companies are also a part of these 183 companies.

DATA ANALYSIS AND INTERPRETATION

Table 1: Comparison of Mean adjusted return (MAR) at listing day

W.R.T. SENSEX				W.R.T. NIFTY-50			
MAR of 32 branded companies	MAR of all 183 companies	T test	P value	MAR of 32 branded companies	MAR of all 183 companies	T test	P value
9.38%	20.52%	-3.181	0.003	9.21%	20.51%	-3.180	0.003

Source: From Researcher’s Sample result

Table 1 shows the comparison of market adjusted return (MAR) of 32 branded companies with all the 183 companies. We can see from the Table. 1 that the mean adjusted initial return of branded companies (9.38% w.r.t. SENSEX and 9.21% w.r.t. NIFTY-50) is very less as compare to all 183 companies (20.52% w.r.t. SENSEX and 20.51% w.r.t. NIFTY-50) and the value of t test also suggest that there is significant difference between the mean adjusted return of branded companies and all other companies.

Value of t test is -3.181 and P value is 0.003 which is less than 0.05 it means our 1st null hypothesis is rejected (at 95 % confidence level) which states that there is no influence of brand name on the IPO underpricing and alternative hypothesis is accepted which states that underpricing is less in case of IPOs with good brand as compare to other IPOs.

Table 2: Comparison of CAAR

	W.R.T. SENSEX				W.R.T. NIFTY-50			
	CAAR of Branded companies(32)	CAAR of All companies(183)	t test	P value	CAAR of Branded companies(32)	CAAR of All companies(183)	t test	P value
1 year after listing	-0.0595	-0.1685	1.296	0.205	-0.06389	-0.16776	1.230	0.228
2	-0.0735	-0.3072	2.173	0.038	-0.0828	-0.31073	2.137	0.041

Table 2 shows the comparison of cumulative average abnormal return (CAAR) between 32 branded companies and all 183 companies for one year after listing and two year after listing.

We can see from the table that the CAAR for branded company (-0.0595 w.r.t. SENSEX and -0.06389 with respect to NIFTY-50 for one year after listing and -0.0735 w.r.t. SENSEX and -0.0828 with respect to NIFTY-50 for two year after listing) is less negative as compared to all other companies (-0.1685 w.r.t. SENSEX and -0.16776 w.r.t. NIFTY-50 for one year after listing and -0.3072 w.r.t. SENSEX and -0.31073 w.r.t. NIFTY-50 for two year after listing) both for 1 year after listing as well as 2 year after listing. Value of t test and P is 1.296 and 0.205 w.r.t. SENSEX and 1.230 and 0.228 w.r.t. NIFTY-50 for 1 year after listing. Here the P value is greater than 0.05 so we accept our 2nd null hypothesis (at 95% confidence level) which states that there is no influence of brand on the long run performance of IPOs.

For two year after listing the value of t test and P is 2.173 and 0.038 w.r.t. Sensex while 2.137 and 0.041 w.r.t. Nifty-50. Here the p value of t tests is less than 0.05. This means the t test is significant and we can reject the 2nd null hypothesis (at 95% confidence level) which states that there is no influence of a brand on the long run performance of IPOs. Thus, we accept the alternative hypothesis which states that IPOs with good brand name perform better in long run compares to other IPOs. 2nd null hypothesis is accepted for 1 year after listing and rejected for 2 year after listing. It means IPOs with good brand name perform better in long run compares to other IPOs.

CONCLUSION

This paper finds out that brand name of company plays a vital role in the performance of her IPO. Our results show that IPOs with good brand name usually less underpriced at the time of listing and perform better in the long run. The reason for this behavior could be good fundamentals and fair pricing of the issues as there would not be any asymmetric information plaguing branded companies unlike unbranded companies. This

may perhaps be the reason why investors become more interested in the branded companies IPOs though not much is left on the table.

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AN EMPIRICAL INVESTIGATION INTO THE DETERMINANTS OF CAPITAL STRUCTURE IN INDIAN IRON & STEEL INDUSTRY

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ABSTRACT

This paper intends to identify the determinants of capital structure in the Indian Iron & Steel Industry. A sample of 21 firms in the Iron & Steel Industry listed at the Bombay Stock Exchange for the period 2001-02 to 2010-11 was selected. The relation of size, tangibility, profitability, debt service capacity, degree of operating leverage and age with leverage has been found to be negative and statistically significant. All these relations are consistent with the predictions of Pecking Order theory. The relation of non-debt tax shield with leverage has been found to be positive and relation is statistically significant. All other variables have been found statistically insignificant in determining the capital structure in Iron & Steel Industry during study period.

Key Words: Capital Structure, Growth, Profitability, Tangibility

INTRODUCTION

An endeavor has been made to examine the determinants of capital structure in the Indian Iron & Steel Industry. The capital structure decision is vital to minimize the risk of bankruptcy and to maximize the shareholders' wealth. Modigliani and Miller (1958) are the first authors who developed capital structure theory. Since then, many researcher followed Modigliani and Miller's (1958) path to develop new theory on capital structure and tried to departure from their assumptions. However, the empirical evidence regarding the alternative theories is still inconclusive (Rajan & Zingales, 1995). Although capital structure theory was developed long time ago and has been debated for many years, it is still one of the main unsolved issues in the literature of corporate finance.

This study focuses on Indian Iron & Steel Industry while only limited research has been conducted on such firms recently. Further, this study validates some of the findings of previous authors by testing the relations of capital structure with determinants of

capital structure in sample firms. Thus, this study adds substance to the existing theory developed by previous authors.

LITERATURE REVIEW

Biger *et al.* (2008) after collecting data from enterprise's census for the year 2002-2003, carried out by General Statistical Office, Vietnam, found leverage decreases with profitability and growth opportunities and increases with firm size. Gill *et al.* (2009) in their study found that leverage is negatively correlated with profitability and collateralized assets. Their study was based on the data gathered from American firms. Odit and Gobardhun (2011) on the basis of data collected from Mauritius firms found a positive relationship between leverage and firm growth.

Gill and Mathur (2011) collected data from 166 Canadian firms and found a positive relationship between firm size and leverage and negative relationships between i) profitability and leverage and ii) collateralized assets and leverage. The review of literature shows that firm's growth opportunities, firm size, asset tangibility and profitability influence the capital structure of the firm but there are so many variables that may influence capital structure but these variables have not been considered in previous studies. Most of the research studies have been conducted in developed countries and there is lack of such studies in developing countries and most of the studies have used four to seven variables in their studies, whereas, this study includes fifteen variables which may influence capital structure of Iron & Steel industry.

OBJECTIVES AND SCOPE OF THE STUDY

The objective of this study is to identify the most significant factors considered by Iron & Steel Industry for designing their capital structure. The present study has been based on secondary data only. The necessary data has been procured from the 'Prowess' maintained by Centre for Monitoring Indian Economy (CMIE). The present study covered period of ten years from 2001-02 to 2010-11. From the list of 500 top companies from Bombay Stock Exchange, firms relating to Iron & Steel Industry have been selected. After proper screening and filtering, we dropped the firms with incomplete data and left with a sample of 21 firms.

RESEARCH DESIGN

Measurement of Variables

Dependent Variable

Capital structure refers to the combination of securities to finance the investment needs of a firm. In line with the Pandey *et al.* (2000) total debt to total assets ratio has been used for measuring leverage in the present study. Total debt includes debt from banks (short term as well as long term) and financial institutions, inter-corporate loans, fixed

deposits from public and directors, foreign loans, loan from government, etc. Total assets include fixed assets and current assets. This study has used book value of debt and total assets. The leverage has been defined for the purpose of this study as follows:

$$\text{Capital Structure} = \text{Total Debt}/\text{Total Assets}$$

Independent Variables

The literature has identified a number of firm characteristics as determinants of capital structure decisions made by corporations. Those factors have been discussed in the following section: Growth has been measured as percentage change in total assets. This study has measured size (SZ) of the firm by the taking the natural log of total assets. Earnings before Interest and Taxes (EBIT) divided by total assets have been used as a measure of profitability in this study. Tangibility has been measured as the ratio of net fixed assets to total assets. In this study age has been measured by number of years since incorporation. This study uses the value of the deviation from mean of net profit divided by total number of years for each firm in a given year as a proxy for measuring earning volatility.

This study has used earnings before interest and taxes to fixed interest charges as proxy for measuring the debt service capacity. This study has used dividend per share to earnings per share to measure the dividend payout ratio. This study has used the current ratio as a proxy for liquidity position of the firm. This study has used the depreciation scaled down by total assets to measure non-debt tax shield. The percentage change in EBIT to percentage change in sales is being used for measuring operating leverage.

MPS/EPS has been used as a proxy for price-earning multiplier.

PH has been measured as a percentage of shares held by the promoters to the total number of shares outstanding.

This study has used the following method to calculate the effective tax rate:

$$\text{TR} = 1 - (\text{EAT}/\text{EBT})$$

This study has used selling and distribution expenses over sales as a proxy for uniqueness.

Note: all the variables were calculated using book value.

Panel Data Model

The panel data model has been adopted from Cuong and Canh (2012). From a random sample, we perform panel data techniques of Fixed Effects model and Random Effects model. After this we apply the Hausman's specification test, if the results of this test rejects the null hypothesis, which is, "*difference in coefficients not systematic*", then we

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use Fixed Effects model otherwise we apply Random Effects model. Further, we test the validity of Random Effects model by applying Wald chi-square test. Variance Inflation Factor (VIF) has been used to check the multi co-linearity among regressors. In the present study, analysis has been performed with the help of software packages STATA.

EMPIRICAL RESULTS

VIF Test

The value of VIF for all independent variables has been found below 5, hence, there should not be any problem of multi-co linearity in model.

Hausman Test for Fixed versus Random Effects

The value of Hausman's specification test is -22.01; the negative value fails to reject the null hypothesis. Thus, the Random Effects model should be appropriate for this study. Therefore, for the remainder of the analysis we work with Random Effects model.

Regression Results

Table 1.1: Random-effects Regression Results for Determinants of Capital Structure in Iron & Steel Industry

R-sq: within = 0.4259 between = 0.7854 overall = 0.5616	Number of observations = 210 Number of groups = 21 Wald χ^2 (15) = 248.54 Prob > χ^2 = 0.0000
Variable	Regression Coefficients
Size (Assets)	-0.046 (2.43)**
Growth (Assets)	0.046 (1.33)
Profitability	-0.599 (3.04)*
Tangibility	-0.256 (2.06)**
Age	-0.002 (2.32)**
Earnings Variability	0.001 (1.04)
Debt Service Capacity	-0.001 (2.61)*
Dividend Payout Ratio	-0.077 (0.79)
Liquidity	-0.008 (0.49)
Non-debt Tax Shield	12.607 (10.55)*
Degree of Operating Leverage	-0.002 (3.20)*
Price-earnings Ratio	0.001 (1.32)
Promoter Holdings	0.084 (0.93)
Tax Rate	-0.007 (0.13)
Uniqueness	-0.151 (0.41)
Cons	0.476 (4.32)
Durbin-Watson Test= 0.747	

** , * indicates significance at 5 per cent and 1 per cent level respectively

Note: The figures given in parentheses indicate the t-values.

EMPIRICAL ANALYSIS

The objective of this study was to find the determinants of capital structure in the Indian Iron & Steel Industry. It is demonstrated through R-square (overall) in the table that 56.16 per cent of variation in capital structure has been explained by model.

The relationship between size and leverage has been observed as negative in Iron & Steel Industry and the relation is statistically significant at 0.05 level. The relation of growth with leverage has been found to be positive in Iron & Steel Industry but the relation is not statistically significant. The relation of profitability with leverage is found to be negative and statistically significant at 0.01 level in Iron & Steel Industry. The beta coefficient for profitability is -0.599 which shows that with one unit change in profitability, the leverage will decline by 0.599 units. The negative relation of profitability with leverage is consistent with the predictions of Pecking Order theory. Negative relationship between profitability and leverage supports the findings of Biger et al. (2008) and Gill et al. (2009) but contradicts with the finding of Abor (2005) who found a positive relationship between profitability and leverage.

The relationship among tangibility and leverage has been found to be negative in Iron & Steel Industry and the relation is statistically significant at .05 level. The negative relation between tangibility and leverage are consistent with Pecking Order theory. Age has negative relation with leverage in Iron & Steel Industry and the relation is statistically significant at .05 level. The positive sign of relationship have been observed between volatility and leverage in Iron & Steel Industry but the relation is not statistically significant. The relation of debt service capacity and degree of operating leverage with capital structure has been found to be negative and statistical significant at .01 level. The relation of dividend payout ratio, liquidity, tax rate and uniqueness with leverage has been found to be negative whereas the relation of price earnings ratio and promoter shareholdings with leverage have been observed as positive for Iron & Steel Industry but these relations are found to be statistically insignificant. The relation of non-debt tax shield with leverage is found to be positive and statistically significant at .01 level.

CONCLUSION

The capital structure of the Indian Iron & Steel Industry is influenced by the firm size, profitability, tangibility, age of the firm, debt service capacity, non-debt tax shield and degree of operating leverage. All other variables have been found statistically insignificant in determining the capital structure in Iron & Steel Industry during study period.

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DETERMINANTS OF WORKING CAPITAL REQUIREMENTS OF AUTOMOBILE INDUSTRY IN INDIA: A STUDY OF PASSENGER VEHICLES SEGMENT

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ABSTRACT

The present paper studies various determinants of working capital requirements of passenger vehicles segment of automobile industry in India. Automotive industry in India is one of the key sectors of the economy. Due to its deep forward and backward linkages with various other important segments of the economy, the industry acts as a key driver of the economic growth of a nation. The study is based on secondary data from 2003-04 to 2012-13. Data has been analyzed with the help of descriptive statistics such as mean, standard deviation, maximum and minimum values; correlation statistics and multiple regression statistics. Working capital ratio was taken as dependent variable while debt equity ratio, cash conversion cycle, operating cash flow, size of the firm, current ratio, quick ratio and assets tangibility were taken as independent variables. An econometric model was established and parameters were estimated based on the panel data for four companies for ten years. The study found that current ratio and tangibility of assets were the significant determinants of working capital requirements of selected companies. Current ratio was positively related to the working capital requirements but tangibility was negatively related to the working capital requirements.

Key Words: Automotive, Automobile, Passenger vehicles, Working capital, Multiple regressions.

INTRODUCTION

Automotive industry in India is one of the key sectors of the economy. Due to its deep forward and backward linkages with various other important segments of the economy, the industry acts as a key driver of the economic growth of a nation.

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Automotive industry in India is divided into two main segments viz. Indian automobile industry and Indian auto components industry. Indian automobile industry consists of passenger vehicles segment, commercial vehicles segment, two wheelers segment and three wheelers segment while Indian auto components industry consists of various product segments viz. engine and engine parts, transmission and steering parts, suspension and breaking parts, equipment, electrical parts and other parts like body and chassis, sheet metal parts, fan belts, pressure die castings etc (IBEF, 2014).

The present paper attempts to study the determinants of working capital requirements of passenger vehicle companies of automobile industry in India which are listed on Bombay Stock Exchange (BSE). This research paper is planned as follows: Section 2 includes brief review of literature. Section 3 describes research design and methodology which includes objectives of the study, hypotheses of the study, data set and sample design, description of selected variables and techniques of analysis. Section 4 mentions limitations of the study. Section 5 presents data analysis and findings of the study. Section 6 is related with the results of the hypotheses of the study. Section 7 and section 8 presents conclusion of the study respectively.

LITERATURE REVIEW

Nazir and Afza (2009) tested the factors that determine the working capital requirements by taking a sample of one hundred and thirty two manufacturing firms from fourteen industrial groups that were listed on the Karachi Stock Exchange between the periods from 2004 to 2007. The study found that operating cycle, leverage, return on assets and the Tobin's q influenced working capital significantly. It was also found that working capital management practices are related to industry and different industries are following different working capital practices.

Mittal et al. (2012) analyzed the working capital trends of Indian cement industry over the period from 2006 to 2009 by taking two Indian cement companies namely Gujrat Ambuja Cements Limited (GAC Ltd) and Associated Cement Companies Limited (ACC Ltd) as a sample. It was found that Indian cement industry has low level of profitability during the study period due to the mismanagement of current assets and current liabilities. It was also revealed that in both companies total assets and sales were increasing while working capital was highly fluctuating in GAC Ltd and it was going down in ACC Ltd. So it was recommended that Indian cement industry should manage working capital in line of sales and total assets and the companies should manage their operating cycle to ensure proper management of working capital.

Mansoori and Muhammad (2012) investigated the effect of working capital management on profitability of ninety two firms listed in the main board of Singapore stock market exchange for the period from 2004 to 2011. The results of the study revealed that all the components of cash conversion cycle viz. receivables conversion

period, inventory conversion period and payable deferral period had negative relationship with profitability. The study suggested that managers can increase profitability of their firms by shortening cash conversion cycle.

Suleiman Abbadi and Rasha Abbadi (2013) investigated the variables that affect the size of working capital in Palestinian firms by taking a sample of eleven firms listed on the Palestinian Security Exchange over a period from 2004 to 2011. It was found that cash conversion cycle, return on assets and operating cash flows were positively related to the working capital requirements while leverage and firm size were negatively related to the working capital requirements of selected firms. Interest rate and real GDP growth rate had no significant impact on working capital of the selected firms. It was also found that Palestinian firms maintained a sizeable working capital due to large conversion cycle and unstable political and economic conditions.

Azinfar and Khalili (2013) tested factors affecting working capital of Pharmaceutical companies accepted in the Tehran Stock Exchange for a period from 2006 to 2011. The sample of study consisted of thirty seven companies listed on Tehran Stock Exchange. The results of the study showed that financial leverage variables, quick ratio, age ratio and growth of total assets had a significant impact on working capital on the other hand return on assets variables and earnings before interest and tax to turnover had no effect on working capital of the selected companies. The study recommended that the firms must maintain optimum liquidity cycle to achieve optimal working capital management.

Kwenda and Holden (2014) studied determinants of working capital investment in South Africa by taking a sample of ninety two companies listed on Johannesburg Stock Exchange (JSE) over the period 2001-2010. It was found that leverage, short term finance and fixed investment significantly influenced the level of working capital investment but operating cash flows, state of the economy, firm size and sales growth rate were found to be statistically insignificantly related to the level of working capital investment. The study suggested that managers should understand the factors affecting level of working capital investment as working capital investment influences the value of firm.

OBJECTIVES OF THE STUDY

- To study the determinants of working capital requirements of the selected passenger vehicle companies of automobile Industry in India.
- To offer suggestions for improvement in the working capital management of the selected companies.

HYPOTHESES OF THE STUDY

The study has been undertaken to test following hypotheses with reference to passenger vehicles segment of automobile industry in India:

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- H₁: Working capital ratio has a significant relationship with return on assets.
- H₂: Working capital ratio has a significant relationship with debt equity ratio.
- H₃: Working capital ratio has a significant relationship with cash conversion cycle.
- H₄: Working capital ratio has a significant relationship with operating cash flow.
- H₅: Working capital ratio has a significant relationship with size of the firm.
- H₆: Working capital ratio has a significant relationship with current ratio.
- H₇: Working capital ratio has a significant relationship with quick ratio.
- H₈: Working capital ratio has a significant relationship with assets tangibility

RESEARCH DESIGN AND METHODOLOGY

Data Set and Sample Design

The present study is based on secondary data. In order to study determinants of working capital requirements of passenger vehicles segment of automobile industry in India data has been collected from Prowess database. The study covers a period of ten years from 2003-04 to 2012-13. The sample of the study consists of four firms of the passenger vehicles segment of automobile industry in India viz. Maruti Suzuki India Ltd., Force Motors Ltd., Hindustan Motors Ltd. and Mahindra & Mahindra Ltd. which are listed on Bombay Stock Exchange (BSE).

Description of the Selected Variables

Dependent Variable:

Working Capital Ratio = Working capital/ Total assets

Independent variables:

- a) Return on Assets (ROA) = Profit before interest and tax/ Total assets.
- b) Debt Equity Ratio (DER) = Debt/Equity.
- c) Cash conversion cycle (CCC) = Average Collection Period + Inventory Turnover Ratio (in days) – Average Payment Period (in days).
- d) Operating Cash Flow (OCF) = Profit before interest and tax + Depreciation – Tax/ Total assets.
- e) Size of the firm (Size) = Log (Total assets).
- f) Current Ratio (CR) = Current assets/ Current liabilities.
- g) Quick Ratio (QR) = Quick assets/ Current liabilities.
- h) Assets Tangibility (Tangibility) = Fixed assets/ Total assets.

Techniques of Analysis:

The data has been analyzed with the help of financial ratios and various statistical tools such as mean, standard deviation, maximum values, minimum values, test of hypotheses and multiple regression using SPSS and Microsoft Excel.

LIMITATIONS OF THE STUDY

Following are the limitations of the study:

- The study is based on secondary data.
- The study covers only four companies from the passenger vehicles segment of automobile industry in India.

DATA ANALYSIS AND FINDINGS

Descriptive Analysis

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum	N
WCR	-0.07	0.11	-0.31	0.18	40
ROA	0.11	0.12	-0.18	0.54	40
DER	1.06	1.60	0.00	6.62	40
CCC	4.94	24.37	-42.64	66.4	40
OCF	-0.09	0.16	-0.46	0.42	40
Size	4.46	0.71	3.43	5.53	40
CR	0.86	0.30	0.25	1.62	40
QR	0.49	0.24	0.11	1.16	40
Tangibility	0.78	0.36	0.29	1.73	40

Descriptive analysis provides the mean and standard deviation of variables under study. It also presents the minimum and maximum values of the variables under study which help in getting knowledge about maximum and minimum values a variable can achieve. Table 1 show that the mean value of working capital ratio is -0.07 which is negative. Maximum value for the working capital ratio is 0.18 and minimum value is -0.31. These values indicate that selected companies are operating with negative working capital during the study period. Mean value of return on assets ratio is 11% and it can deviate from 11% to both sides by 12%. Maximum value for the return on assets ratio is 0.54 and minimum value is -0.18. Negative minimum value of return on assets indicates poor performance of selected companies during period of study. Mean value of debt equity ratio is 1.06 which is less than standard 2:1. This shows that there is sufficient protection available to long term lenders. Mean value of operating cash flow is -0.09 which is also negative. Mean value of current ratio is 0.86 and that of quick ratio is 0.49. Both these values are less than their standard norms. This reveals poor liquidity position of the selected companies.

Correlation Analysis

This is the analysis of relationship between various independent and dependent variables. As seen in Table 2 that, the working capital is positively correlated with the

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Table 2: Correlations

		WCR	ROA	DER	CCC	OCF	Size	CR	QR	Tangibility
WCR	Pearson Correlation	1	.499**	-.121	.504**	.176	-.105	.963**	.863**	-.060
	Sig. (2-tailed)		.001	.456	.001	.278	.520	.000	.000	.714
	N	40	40	40	40	40	40	40	40	40
ROA	Pearson Correlation	.499**	1	-.473**	.126	.709**	.442**	.420**	.589**	-.539**
	Sig. (2-tailed)	.001		.002	.439	.000	.004	.007	.000	.000
	N	40	40	40	40	40	40	40	40	40
DER	Pearson Correlation	-.121	-.473**	1	-.039	-.271	-.538**	-.086	-.231	.434**
	Sig. (2-tailed)	.456	.002		.812	.091	.000	.599	.152	.005
	N	40	40	40	40	40	40	40	40	40
CCC	Pearson Correlation	.504**	.126	-.039	1	-.032	-.273	.452**	.153	.209
	Sig. (2-tailed)	.001	.439	.812		.843	.088	.003	.347	.196
	N	40	40	40	40	40	40	40	40	40
OCF	Pearson Correlation	.176	.709**	-.271	-.032	1	.456**	.068	.223	-.546**
	Sig. (2-tailed)	.278	.000	.091	.843		.003	.678	.167	.000
	N	40	40	40	40	40	40	40	40	40
Size	Pearson Correlation	-.105	.442**	-.538**	-.273	.456**	1	-.188	.199	-.905**
	Sig. (2-tailed)	.520	.004	.000	.088	.003		.245	.219	.000
	N	40	40	40	40	40	40	40	40	40
CR	Pearson Correlation	.963**	.420**	-.086	.452**	.068	-.188	1	.886**	.060
	Sig. (2-tailed)	.000	.007	.599	.003	.678	.245		.000	.714
	N	40	40	40	40	40	40	40	40	40
QR	Pearson Correlation	.863**	.589**	-.231	.153	.223	.199	.886**	1	-.299
	Sig. (2-tailed)	.000	.000	.152	.347	.167	.219	.000		.061
	N	40	40	40	40	40	40	40	40	40
Tangibility	Pearson Correlation	-.060	-.539**	.434**	.209	-.546**	-.905**	.060	-.299	1
	Sig. (2-tailed)	.714	.000	.005	.196	.000	.000	.714	.061	
	N	40	40	40	40	40	40	40	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

profitability measured by ROA (0.499), cash conversion cycle (0.504), current ratio (0.963) and quick ratio (0.863) significant at 1% level. It can be said that the better the firm manages its working capital more profitable the firm will be and it can also be said that the more profitable firms can manage their working capital in a better way. Return on Assets (ROA) is positively correlated with operating cash flow (0.709), size of the firm (0.442), current ratio (0.420), quick ratio (0.589) and is significant at 1% level.

Furthermore, Return on Assets (ROA) is negatively correlated with debt equity ratio (-.473), tangibility of assets (-0.539) and is significant at 1% level. Debt equity ratio is negatively correlated with size of the firm (-0.538) and positively correlated with tangibility of assets (0.434), both significant at 1% level. Cash conversion cycle is positively correlated with current ratio (0.452) significant at 1% level. Operating cash flow is positively correlated with the size of the firm (0.456) and negatively correlated with the tangibility of assets (-0.546), both significant at 1% level. Size of the firm measured by natural logarithm of assets is negatively correlated with the tangibility of assets (-0.905) and is significant at 1% level. Current ratio is positively related with quick ratio (0.886) significant at 1% level.

Regression Analysis

Model Specification

$$WCR = \alpha + \beta_1 DER + \beta_2 CCC + \beta_3 OCF + \beta_4 Size + \beta_5 CR + \beta_6 QR + \beta_7 Tangibility + e_t$$

Where the variables are discussed above, α is the constant or intercept, β_1 to β_7 are the coefficients of the variables.

Table 3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.979 ^a	.958	.948	.02621	1.660
a. Predictors: (Constant), Tangibility, CR, DER, CCC, OCF, ROA, Size, QR					
b. Dependent Variable: WCR					

Table 3 shows that the value of multiple correlation coefficient between the dependent variable and independent variables taken together is 0.979 which indicates a good level of prediction. The value of coefficient of determination (R square) is 0.948 which indicates that 94.8 percent of variation in dependent variable is explained by joint variation in independent variables. Durbin-Watson statistic is used to detect the presence of autocorrelation. Here the value of Durbin-Watson statistic is 1.660 which is less than 2, it means there exists a positive serial correlation among the variables.

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Table 4: ANOVA^b

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	.491	8	.061	89.415	.000 ^a
	Residual	.021	31	.001		
	Total	.513	39			
a. Predictors: (Constant), Tangibility, CR, DER, CCC, OCF, ROA, Size, QR						
b. Dependent Variable: WCR						

The results shows that F ratio and p value are F= 89.415 and p = 0.000 respectively. So the model fit well in terms of R, R square and F ratio.

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.218	.125		-1.747	.091
	ROA	.030	.071	.033	.426	.673
	DER	.001	.004	.009	.166	.869
	CCC	.000	.000	.091	1.403	.171
	OCF	.025	.043	.035	.577	.568
	Size	-.020	.020	-.126	-1.029	.311
	CR	.374	.085	.976	4.392	.000
	QR	-.042	.103	-.089	-.413	.683
	Tangibility	-.078	.031	-.245	-2.482	.019
a. Dependent Variable: WCR						

Unstandardized coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant.

ANALYSIS OF HYPOTHESES

- 1. First hypothesis result:** First hypothesis of the study is working capital ratio has a significant relationship with return on assets. According to table 5 there is no significant relationship between working capital ratio and return on assets of selected companies with t= 0.426 and p value= 0.673, because it is more than 5 percent.
- 2. Second hypothesis result:** Second hypothesis of the study is working capital ratio has a significant relationship with debt equity ratio. According to table 5 there is no significant relationship between working capital ratio and debt equity ratio of selected companies with t= 0.166 and p value= 0.869, because it is more than 5 percent.

3. **Third hypothesis result:** Third hypothesis of the study is working capital ratio has a significant relationship with cash conversion cycle. According to table 5 there is no significant relationship between working capital ratio and cash conversion cycle with $t= 1.403$ and p value= 0.171 , because it is more than 5 percent.
4. **Fourth hypothesis result:** Fourth hypothesis of the study is working capital ratio has a significant relationship with operating cash flow. According to table 5 there is no significant relationship between working capital ratio and operating cash flow with $t= 0.577$ and p value= 0.568 , because it is more than 5 percent.
5. **Fifth hypothesis result:** Fifth hypothesis of the study is working capital ratio has a significant relationship with size of the firm. According to table 5 there is no significant relationship between working capital ratio and size of the firm with $t= -1.029$ and p value= 0.311 , because it is more than 5 percent.
6. **Sixth hypothesis result:** Sixth hypothesis of the study is working capital ratio has a significant relationship with current ratio. According to table 5 there is significant positive relationship between working capital ratio and current ratio with $t= 4.392$ and p value= 0.000 , because it is less than 5 percent.
7. **Seventh hypothesis result:** Seventh hypothesis of the study is working capital ratio has a significant relationship with quick ratio. According to table 5 there is no significant relationship between working capital ratio and quick ratio with $t= -0.413$ and p value= 0.683 , because it is more than 5 percent.
8. **Eighth hypothesis result:** Eighth hypothesis of the study is working capital ratio has a significant relationship with tangibility of assets. According to table 5 there is significant negative relationship between working capital ratio tangibility with $t= -2.482$ and p value 0.19 , because it is under 5 percent.

CONCLUSION

The present study tries to find the variables that determine the working capital requirements of passenger vehicles companies of Automobile industry in India which are listed on Bombay Stock Exchange. On the basis of the findings of the research out of eight independent variables current ratio and tangibility of assets are found statistically significant determinants of working capital. Current ratio is positively related to the working capital requirements but tangibility of assets is negatively related to the working capital requirements. It can be said that the companies can improve their working capital management by handling these factors in an efficient manner. It was also found that debt equity ratio, cash conversion cycle and operating cash flow are not affecting working capital requirements of the selected companies in a significant manner. These findings are in contradiction to the findings of some of the earlier studies on this issue. Further research in this area can explore the reasons for these contradictions.

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IMPACT OF SUCCESSIVE DISINVESTMENT ANNOUNCEMENT ON STOCK PERFORMANCE OF PSUS

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ABSTRACT

This study made an attempt to gauge the impact of successive disinvestment announcement on the stocks of PSUs. The event study methodology is adopted to find the impact. The chosen study period is 2005 to 2012. To test the impact of announcement the study computed AR (Abnormal Return), AAR (Average Abnormal Return), CAAR (Cumulative Average Abnormal Return). The null hypothesis of the study successive disinvestment does not have significant impact on the PSUs stocks are tested by Z value. The CAAR of PSU stocks shows the significant values as it indicates successive divestment of stocks having significant impact on the stock returns of PSUs.

Key words: Disinvestments, Stocks Performance, PSUs

INTRODUCTION

After 2001, there are number of public sector companies announcing its successive issue of shares. The list of the companies is shown in Table 1. To find the impact on stock price the study uses event study methodology. The event studies have been in a large variety of studies, including mergers and acquisitions, earnings announcements, debt of equity issues, investment decision, CEO resignation announcements and company related activities like Stock split, Bonus announcement etc. (Mackinlay 1997). Event studies are used to measure market efficiency and to determine the impact of a given event on security prices. Most interestingly from a investment perspective, event studies are used to back-test price data to determine the efficacy and reliability of trading strategies. The present study, proposes to analyze the price effect on stock price

of PSUs in Indian stock market associated with successive divestment announcement. The study has been done on the stocks of select PSUs in BSE.

REVIEW OF LITERATURE

The announcement impacts in global as well as Indian stock market have been studied by many scholars across the country and different time duration. The first published study of event study methodology is James Dolley (1933), in his work he evaluates the nominal change in stock price during the stock split.

Over the decades from the early 1930 until the late 1960s the level of sophistication of event studies is increased. The investigation done by Austin Barker (1956, 1957, 1958), and John Ashley (1962) are examples of studies during this time period. This includes included removing general stock market price movements and separating out confounding events. In the late 1960s seminal studies in this area made by Ray Ball and Philip Brown (1968) tried to find information content of the earnings announcement. Eugene Fama et al (1969), studied the impact of stock split announcement on the stock price. Copeland (1979) studied the bonus announcement makes changes in price and thereby the share affordable to all the investors and thus increase the demand; it leads to abnormal return in stock price. Grinblatt et al (1984), Doran and Natchmann (1988) and Arbel and Swanson (1993) found that stock split and bonus offer announcements are some of the ways of catching the attention of the market by the firms. Lakonishok and Lev (1987) and Han (1994) provided some empirical evidences on the increase in liquidity of stock after the announcement of dividend.

Studies in Indian context

Ramachandran (1995) studied the bonus effect on stock prices and found mixed evidence of semi-strong form of market efficiency. Rao and Geetha (1996) studied bonus announcements impact on Indian stocks and find there is no significant impact. Angel (1997) and Schultz (2000) in their works have studied that stock splits and bonus announcements lead to an increase in relative bid-ask spread and make the market more active in the counter. Das P et al.,(2000) have studied the reaction of GDR prices and the underlying share prices to the announcement of dividends and found that the CAR for the GDR is mostly negative irrespective of the rate of dividend whereas the domestic share prices react in a more synchronous manner. Rao & Likose (2002) examined the security price behavior around the announcement of stock splits and around ex-split date. They find that stock shows abnormal return on the event day (i.e announcement of stock split) and the next day. Mishra (2005) found positive abnormal return on and around the announcement day associated with bonus announcement. Raja and Clement Sudhakar (2010) tested the bonus issue announcement impact on the stocks of Indian IT companies. They find that there is scope for earning abnormal return in the stock by taking timely investment decisions. Joshipura (2013) founded that stock

split announcement does not find significant impact on the stock price. Sehgal et al.,(2012) studied the consequence on stock returns due to Merger and Acquisitions in six countries and find that 5 out of 6 countries shows significant returns in the pre event. Mallikarjunappa & Nayak (2013) examined the wealth of effect on takeover companies by doing event study analysis in Indian market.

So far, many studies have been done to find the impact on stock prices through event study methodology by taking stock bonus announcement, stock split announcement, merger and acquisitions and Central Bank actions such as CRR (Cash Reserve Ratio) and Repo Rate announcement. However there is no particular study in finding the impact on stock prices due to successive divestment of PSUs. The study fills the gap by taking the PSU companies in Indian stock market.

DATA & METHODOLOGY

The study deals with the successive disinvestment announcement of existing PSU stocks. During the period 2001 to 2012 there were 8 companies came into the stock market by the mode of successive divestment. The listing day of the company is taken as a event day. 30 days before and 30 days after the event day have been taken into account for the analysis. The study took 61 day event window period, the decision is subjective, and thus it gives some clearer picture about the stock performance before and after the event date. One month time is fair enough for the investors to take investment decision regarding the announcement of PSU stocks. The table 1 shows the list of companies during the study period.

Table 1: List of companies taken as sample

Name	Issue size (Rs. lakhs)	Issue price (Rs)	Listing day closing price (Rs)	Lowest Current market price reached after listing date (Rs)
NMDC Ltd	996,730	300	285.15	189.60
NTPC Ltd	847,875	201	205.10	166.45
Rural Electrification Corp Ltd	352,994	203	241.45	230.85
Power Grid Corp of India Ltd	744,234	90	96.55	118.10
Shipping Corp of India Ltd	116,473	140	132.60	57.10
Engineers India Ltd	95,935	290	333.35	229.85
Power Finance Corp Ltd	465,993	203	199.50	199.95

Source: www.bsepsu.com

The table discloses the values of Issue size. Among the companies the NMDC is the largest issuer with the value of Rs. 9967 crores. Engineers India is the least issuer amounts to Rs. 950 crores.

TOOLS USED FOR THE ANALYSIS

A standard event study methodology was used to measure share price reaction to the offer announcements. The event day for each company is the listing date of PSU stocks on BSE. An event window of 61 days, centered the event day, was taken for the study to find the impact of successive disinvestment announcement. The parameters of the model were estimated 30 days before the event and 30 days after the event by using BSE Sensex.

The Daily Returns

The daily returns on each security in this sample were calculated by using the following model

$$R_{it} = \left(\frac{P_t - P_{t-1}}{P_{t-1}} \right) * 100 \quad \text{-----} \quad (1)$$

Where, R_{it} = Returns on security i on time t
 P_t = Price of the security at time t
 P_{t-1} = Price at time t –1

Abnormal Return (AR)

According to Weston, Chung, and Hoag (2007), AR is the part of the return on a security on day t that is not predicted, and therefore, is an estimate of the change in firm’s share price on that day which is caused by the event. The following market model of Sharpe (1963) is used in our study to compute the AR:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad \text{-----} \quad (2)$$

In the above model, ARs are computed by deducting the expected returns computed in the OLS market model regression, from the actual returns on day ‘t’ for security ‘i’. Some of the studies which have followed the above model are Dodd (1980), Collins and Dent (1984), Lewellen, Loderer and Rosenfeld (1985), Jain (1986), Chatterjee (1986), Singh and Montgomery (1987), Seth (1990), Limmack (1991), sudarsanam et al. (1996), DeLong (2003), Kumar (2004), Dash (2004), Das, Pattanayak, and Pathak(2007), Raja and Clement sudhakar (2010), Kirubakaran and Dharmalingam (2012), Mallikarjunappa and Nayak (2013) to find the announcement impact on the stock price. This is a wide popular model which incorporates the market risk and a wide majority of researchers use this model in their empirical investigation.

Average Abnormal Return (AAR)

In order to eliminate the effect of any security on abnormal returns, the abnormal returns are averaged over the number of companies. According to Weston et al. (2007)

“the reason for averaging across the firms is that stock returns are noisy, but the noise tends to cancel out when averaged across a large number of samples.”

The AAR are computed by using the following formula

$$AAR_t = \frac{\sum_{i=1}^N AR_{it}}{N} \quad \text{-----} \quad (3)$$

for $i = 1 \dots N$; $t = -30 \dots 0 \dots +30$

In the above model,

i = the number of specific security in the study

N = total number of securities

t = the days surrounding the event-day

Cumulative Average Abnormal Return (CAAR)

With a view to know the cumulative abnormal performance of stocks the CAARs are calculated. CAARs are calculated by adding the AARs for each time period beginning 30 days before the event day and ending 30 days after the event day. The mode used to compute the CAAR is;

$$CAAR = \sum_{t=-30}^{+30} AAR_t \quad \text{-----} \quad (4)$$

$t = -30 \dots 0 \dots +30$ days

Testing the statistical significance of the AARs and CAARs

The statistical significance of values of AARs and CAARs, are tested through the following methods

Statistical significance of AARs

In This methodology adopted used by Mallikarjunappa and Nayak (2013), the hypothesis is that the cross-sectional AARs are zero. The statistical significance of AAR for each day ‘t’ surrounding the event day is assessed by dividing AAR_t by its standard deviation which is denoted by σ_{AARt}

$$\text{Test statistic} = \frac{AAR_t}{\sigma_{AARt}}$$

where,

$$AAR_t = \frac{\sum_{i=1}^N AR_{it}}{N}$$

AAR_t = Average abnormal return on day ‘t’ in the event window

AR_{it} = Abnormal returns on security ‘i’ on day ‘t’

N = Total number of securities

t = The days surrounding the event-day

σ_{AAR_t} = Standard deviation of AAR_t

$$\sigma_{AAR_t} = \sqrt{\frac{\sum_{t=1}^T (AAR_t - \overline{AAR})^2}{(N-1)}}$$

where, $\overline{AAR} = \frac{\sum_{t=1}^T AAR_t}{N}$

t = -280 to -31 days

AAR_t = Average abnormal return on day 't' in the estimation period

\overline{AAR} = Mean of AARs in the estimation period of 250 days, before the event taken place.

N = Total number of days in the estimation period.

T = Number of days in the estimation period, which is equal to 250 days our study. i.e -280 to -31 days from the date of announcement of take over.

The above model has been employed by Mallikarjunappa and Nayak, (2013), Mann and Kohli (2008), and Gong and firth (2006). According to Brown and Warner (1985) "If the AARs are independent, identically distributed, and normal, the test statistics is distributed Student -t under the null hypothesis."

Statistical Significance of CAAR

$$Z = \frac{CAAR}{\sigma_{AAR_t}}$$

$$CAAR = \sum_{t=1}^T AAR_t$$

where, t in the above equation is the number of days (i.e from 30 days to +30 days) over which AARs are cumulated in the event window.

$$\sigma_{AAR_t} = \sqrt{\frac{\sum_{t=1}^T (AAR_t - \overline{AAR})^2}{(N-1)}}$$

t in the above equation is the number of days in the estimation period.

Mallikarchunappa and Nayak (2013) have used the above model in Indian context.

RESULTS AND DISCUSSIONS

The empirical analysis on successive divestment results are presented in this section. The AARs of -30 days to +30 days, of the stocks of chosen PSUs along with Z value are exhibited in Table 2.

From the table it is clear that AARs are positive for 34 days and further it reveals the positive value in the event day. Totally 26 days shows the significant values, out of

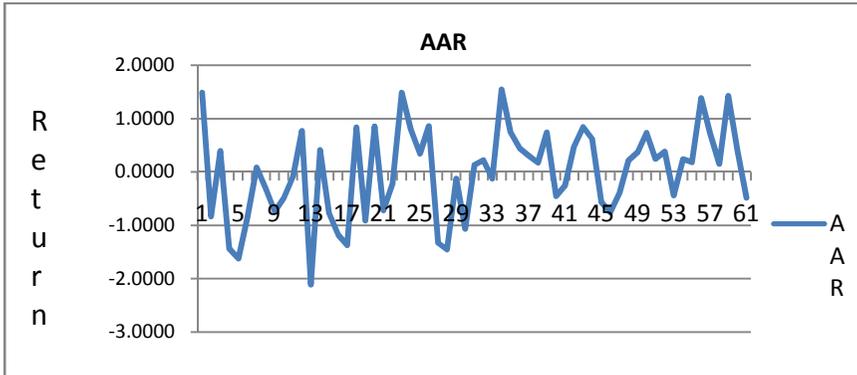
which 14 days shows the negatively significant values, 12 days shows the positive significant values. In the event day AAR records the insignificant positive value. Starting from the event day the share prices are consistently positive upto 10 days. Based on the analysis majority of the AARs are not significant.

Table 2: AAR of stocks Around Event Day

Event Day	AAR	Z value	Event Day	AAR	Z value
-30	1.4865	3.9729	1	0.2230	0.5960
-29	-0.8336	-2.2280	2	-0.1197	-0.3199
-28	0.3945	1.0542	3	1.5471	4.1348
-27	-1.4329	-3.8297	4	0.7485	2.0005
-26	-1.6166	-4.3206	5	0.4411	1.1789
-25	-0.8525	-2.2784	6	0.3096	0.8275
-24	0.0880	0.2352	7	0.1752	0.4683
-23	-0.3016	-0.8062	8	0.7414	1.9816
-22	-0.7420	-1.9831	9	-0.4535	-1.2120
-21	-0.4909	-1.3121	10	-0.2515	-0.6723
-20	-0.0855	-0.2285	11	0.4742	1.2675
-19	0.7717	2.0625	12	0.8411	2.2478
-18	-2.1082	-5.6345	13	0.6230	1.6650
-17	0.4128	1.1033	14	-0.5627	-1.5040
-16	-0.7702	-2.0585	15	-0.7570	-2.0232
-15	-1.1807	-3.1555	16	-0.3906	-1.0438
-14	-1.3661	-3.6512	17	0.2172	0.5804
-13	0.8400	2.2450	18	0.3745	1.0008
-12	-0.9125	-2.4387	19	0.7382	1.9730
-11	0.8548	2.2845	20	0.2459	0.6572
-10	-0.7201	-1.9246	21	0.3831	1.0240
-9	-0.2282	-0.6100	22	-0.4380	-1.1705
-8	1.4880	3.9769	23	0.2419	0.6465
-7	0.8096	2.1637	24	0.1801	0.4813
-6	0.3414	0.9124	25	1.3847	3.7008
-5	0.8622	2.3043	26	0.7244	1.9361
-4	-1.3271	-3.5469	27	0.1516	0.4053
-3	-1.4547	-3.8877	28	1.4271	3.8142
-2	-0.1239	-0.3312	29	0.3885	1.0383
-1	-1.0672	-2.8522	30	-0.4784	-1.2787
0	0.1351	0.3612			

Source: computed data from CMIE -database

Figure 1: AARs of event date



The figure 1 shows the AARs of surrounding the event date; Majority of returns have occurred in the negative side before the event but after the event most of the returns are occurred in the positive side. It suggests that investor may sell the stock one month before the listing date and on the day of listing they may buy the stock. This trading activity might give abnormal return to the existing shareholders of PSUs.

The Table 3 exhibits the CAARs of shares of the successively divested PSUs. The net or cumulative impact of the successive disinvestment on the stock prices are examined by observing statistical significance of CAARs. On the event day the CAARs shows the -10.09 return significantly (Z value, -14.78).

The CAARs are negative for 58 days in the 61 days event window. The period upto event day the value stood at -10.09 with consistently negatively accruing return. After the event the share prices started giving positive returns, then the negative CAAR started declining and end with the return of -2.17 with significant Z value (Z value, 3.177). Major part of negative return occurred before the event date. The null hypothesis that CAAR is not significantly different from zero is rejected.

The results cautioned the investors of PSUs about the successive divestment as it shows only the negative returns from a month earlier. It is better decision to offload the stocks of PSU in the secondary market for those PSUs coming to primary market.

Table 3: CAAR of stocks Around Event Day

Event Day	CAAR	Z value	Event Day	CAAR	Z value
-30	1.4865	2.1761	1	-9.9638	-14.5855
-29	0.6529	0.9557	2	-9.7408	-14.2591
-28	-0.1807	-0.2646	3	-9.8605	-14.4344
-27	0.2137	0.3129	4	-8.3134	-12.1696
-26	-1.2192	-1.7848	5	-7.5649	-11.0739
-25	-2.8359	-4.1513	6	-7.1238	-10.4282
-24	-3.6884	-5.3992	7	-6.8142	-9.9749
-23	-3.6004	-5.2704	8	-6.6389	-9.7184
-22	-3.9020	-5.7120	9	-5.8975	-8.6331
-21	-4.6440	-6.7981	10	-6.3510	-9.2969
-20	-5.1349	-7.5168	11	-6.6025	-9.6651
-19	-5.2205	-7.6420	12	-6.1283	-8.9709
-18	-4.4487	-6.5123	13	-5.2872	-7.7397
-17	-6.5569	-9.5984	14	-4.6642	-6.8277
-16	-6.1441	-8.9941	15	-5.2270	-7.6515
-15	-6.9143	-10.1216	16	-5.9840	-8.7596
-14	-8.0950	-11.8499	17	-6.3745	-9.3314
-13	-9.4612	-13.8498	18	-6.1574	-9.0135
-12	-8.6212	-12.6201	19	-5.7829	-8.4653
-11	-9.5337	-13.9559	20	-5.0447	-7.3847
-10	-8.6789	-12.7046	21	-4.7988	-7.0247
-9	-9.3990	-13.7587	22	-4.4156	-6.4638
-8	-9.6272	-14.0928	23	-4.8536	-7.1049
-7	-8.1392	-11.9146	24	-4.6117	-6.7508
-6	-7.3296	-10.7295	25	-4.4316	-6.4872
-5	-6.9882	-10.2297	26	-3.0469	-4.4602
-4	-6.1261	-8.9676	27	-2.3224	-3.3997
-3	-7.4532	-10.9103	28	-2.1708	-3.1777
-2	-8.9078	-13.0397	29	-0.7437	-1.0886
-1	-9.0318	-13.2211	30	-0.3552	-0.5199
0	-10.0990	-14.7834			

Source: computed data from CMIE -database

CONCLUSION

The study documents the select PSU stocks behavior around the successive divestment event. The results of the study indicate that the successive divestment of PSUs giving negative returns to the shareholders. The CAARs are negative from -30 days running up to event day showing -10.09, after the event day the stock returns are turning into positive side at the end (+28 days after the event date) CAAR stood significantly at -2.17. One month before the listing date the shareholders of PSU realized negative returns and this will fade away after the event date, so the successive divestment can impact share price around the listing date.

The realistic implication of the study is that there is a significant negative impact on the stock returns of PSUs regarding the successive divestments. It is also implied from this study that the stocks of PSUs are semi strong form efficient as the investors of PSUs realize significant negative CAARs around the event period. The conclusion of this study gives insight to the existing investors of PSUs that they benefit from offload the shares before the event date.

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IMPACT OF CAPITAL STRUCTURE ON FIRM'S PROFITABILITY: A STUDY OF SELECTED LISTED JUTE COMPANIES IN INDIA

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ABSTRACT

This paper modestly tries to investigate the impact of capital structure on a firm's profitability through a study of some listed jute companies in India. The study is driven by the unsteady financial performance of Indian jute industry over the last few years resulting in closure of several jute companies in India. The study is based on secondary data collected from various reliable sources. The link between capital structure and profitability is determined with the help of a simple statistical tool to make the analysis relevant and draw logical inferences.

Key Words: Capital Structure, Profitability, Jute Mills,

INTRODUCTION

Being a traditional agro-based manufacturing industry, the Indian jute industry does not only occupy an important position in the national economy, but it is known for its global significance too, since decades. It is the largest producer of raw jute and jute products in the world. The other major jute producing countries are Bangladesh, China, Nepal, Thailand, Myanmar, Pakistan and Vietnam. India holds the second largest position in the world after Bangladesh as regards export of jute goods. Though India contributes a major portion of world's production of jute goods, its annual growth in terms of production and exports of jute goods have not shown much progress in the recent past. As per a recent report on Indian Jute sector published by the *Ministry of Textiles, Government of India*, the average land area for raw jute production in India is approximately 918 thousand hectares and it yields 10,843 thousand bales of raw jute per year. Besides, the total number of composite jute mills in India is 83 as of April, 2011 and the average collective production of jute goods by these composite jute mills is 1,575 thousand tons per year, out of which the average yearly export of jute goods in terms of quantity and value are 178 thousand tons and Rs. 11,456 million respectively. These figures could have been much better had there been no closure of the jute

mills, which had either become financially sick or had been closed down because of poor profitability. There might be other reasons too for such closures, but the most crucial and alarming fact is that out of total jute mills in India, 35 jute mills are referred as sick and 12 jute mills are under suspension of work [Source: *Jute Commissioner, Ministry of Textiles, Government of India, June, 2009*]. The following table 1 shows how such closures of jute mills have taken place in India over the years.

Table 1: Jute Mills under Suspension of Work in India

Name of the State	Name of the Jute mill	Date of Suspension of Work
West Bengal	The Gouripore Co. Ltd.	4-Sep-98
	Alexandra Jute Mill	1-Sep-02
	National Jute Mill	17-Feb-02
	Union Jute Mill	11-Mar-03
	Khurdah Jute Mill	26-Mar-04
	Kinnison Jute Mill	26-Mar-04
	Soorah Jute Mill	29-Mar-04
	Kamarhatty Jute Mill	23-May-09
Bihar	R.B.H.M Jute Mill	24-Mar-04
Uttar Pradesh	Kanpur Jute Udyog	13-Apr-87
Andhra Pradesh	Chitavalsa Jute Mill	19-Apr-09
Chhattisgarh	Mohan Jute Mill Ltd.	3-Dec-08

Source: *Jute Commissioner, Ministry of Textiles, Government of India, June, 2009*

There is no denying the fact that the *Government of India* has been taking a number of initiatives over the years such as setting up of different authorities and legislative councils for implementing various acts and schemes to keep pace with the global jute market, running of Jute Technology Mission (JTM) for modernization of jute mills, tracking of Minimum Support Price (MSP) scheme for raw jute price maintenance, practicing many rehabilitation schemes for the revival of sick jute mills etc. to rejuvenate this ancient industry. But in spite of all these, this traditional industry is yet to bloom again, and in recent times the problems have multiplied and compelled this industry to struggle enormously. It is observed that jute mills are striving hard to sustain in the market. They are facing problems which were seen to be raised from external and internal reasons. These were identified as increasing cost of labor, adverse working conditions, competitors, etc. This is influencing the firm's financial status, but severe impact was due to internal factors of the firms. Experiences suggest that the main internal problems include poor profitability, insufficient working capital, dearth of capital employed etc. These internal factors are quite sensitive to the capital structure composition of an organization. Accordingly, the present study modestly seeks to analyze the impact of capital structure on profitability of some listed jute companies in India so as to understand how the capital structure composition of the concerned companies affects their profitability and hence identify the major loopholes, if any, in

IMPACT OF CAPITAL STRUCTURE ON FIRM'S PROFITABILITY: A STUDY OF SELECT LISTED JUTE COMPANIES IN INDIA

their existing capital structure, and suggest the remedial measures to improve the overall situation as far as practicable and reasonable.

Now, in this context a brief discussion regarding the literature on the basis of which this study has been put forth becomes imperative. From the existing literature it is found that capital structure decision is the fundamental one because profitability of a firm is directly related with such decision. The successful selection of types and use of capital is one of the key elements of a firm's financial strategy. Hence, proper care and attention need to be given while formatting the firm's capital structure. The work of Banu (1990) provides support to this argument, by stating that wobbly formed capital structure impacts adversely on profitability. Furthermore, the study of Nimalathan and Brabete (2010) also explained the existence of positive relationship between capital structure and profitability through Debt Equity Ratio and Gross Profit Ratio (GPR), Operating Profit Ratio (OPR) and Net Profit Ratio (NPR). Azhagaiah and Gavoury (2011) found a strong positive relationship between Return on Assets (ROA) and Return on Capital Employed (ROCE) and profitability, in IT firms. Velnampy and Niresh (2012) proved that there is a significant association between D/E ratio and Return on Equity (ROE) through their study on banking sector. Based on the above literature, it can be said that capital structure composition and employment of such capital should be appropriate to gain a positive impact on a firm's profitability. The present study regarding the impact of capital structure on profitability of the selected jute companies in India throws light on the effectiveness of capital structure of such companies over the last few years, and is motivated by the continuous unfavorable performance of Indian jute industry coupled with closure of several jute companies in India.

Therefore, the remainder of the paper is organized as follows. *Section 2* sketches the objectives of the paper and outlines the propositions of the study. Research methodology has been enumerated in *Section 3*. The analysis of financial data, descriptive statistics and interpretations are given in *section 4*. Finally, conclusions are drawn in *Section 5*.

OBJECTIVES OF THE STUDY

The *general objective* of the study is to examine the impact of capital structure on profitability of the selected Jute companies in India. *More specifically*, the paper attempts to:

- Explore the relationship of Debt/Equity ratio with Profit to Sales Ratio, Return on Investment, Return on Capital Employed and Return on Equity of the selected companies;
- Explore the relationship of Debt/Capital ratio with Profit to Sales Ratio, Return on Investment, Return on Capital Employed and Return on Equity of such companies, and
- Suggest some policy measures to improve such associations, if required.

The following eight propositions (P) have been framed for the present study.

P ₁ :	There exists a relationship between Debt/Equity and Profit to Sales Ratio.
P ₂ :	There exists a relationship between Debt/Equity and Return on Capital Employed.
P ₃ :	There exists a relationship between Debt/Equity and Return on Investment.
P ₄ :	There exists a relationship between Debt/Equity and Return on Equity.
P ₅ :	There exists a relationship between Debt/Capital and Profit to Sales Ratio.
P ₆ :	There exists a relationship between Debt/Capital and Return on Capital Employed.
P ₇ :	There exists a relationship between Debt/Capital and Return on Investment.
P ₈ :	There exists a relationship between Debt/Capital and Return on Equity.

RESEARCH METHODOLOGY

To examine the relationship between capital structure and profitability, a sample of five jute mills (Ludlow Jute & Specialties Ltd., Cheviot Company Ltd., Gloster Jute Mills Ltd., Howrah Mills Co. Ltd. and AI Champdany Industries Ltd.) is drawn from the Indian jute Industry based on their availability of data. The selected jute companies are listed in Bombay Stock Exchange (BSE) and/or Calcutta Stock Exchange (CSE), India. For example, Gloster Ltd and AI Champdany Ltd are listed in both the stock exchanges while Ludlow and Cheviot jute mills are listed in the BSE and Howrah jute mill is listed in the CSE only. The focus of the study is on firm level analysis, for which the financial data are collected from the websites of the concerned companies and other relevant secondary sources. A time frame of five years i.e. from 2009 to 2013 is selected to analyze the impact of capital structure of the selected companies on their profitability. Descriptive statistics are used to describe and summarize the behavioral pattern of the variables in the present study, and in order to test the research propositions, Correlation Analysis is carried out.

ANALYSIS AND FINDINGS

Under the present study, 'capital structure' is assumed to be the independent variable and 'profitability' as the dependent variable. Some ratios are being used to measure the capital structure and profitability of the selected companies. As a measure of capital structure, the study uses Debt/Equity ratio and Debt/Capital ratio, and in case of profitability measurement, the ratios considered are namely Profit to Sales Ratio (PSR), Return on Capital Employed (ROCE), Return on Investment (ROI) and Return on Equity (ROE). PSR signifies the percentage of profit before tax in respect to net sales, ROCE examines the relation between PBIT and capital employed while ROI indicates the relationship between operating profit and capital employed and ROE measures the ultimate return to the shareholders. The following table 2 shows the variables/ratios and how they are computed.

Table 2: Capital Structure & Profitability Ratios

Capital Structure Measurement		Profitability Measurement	
Ratios	Formula Used	Ratios	Formula Used
Debt to Equity	Long Term Debt/Share Holders' Fund or Net Worth	Profit to Sales	PBT/Net Sales
Debt to Capital	Long Term Debt/Total Capital	Return on Capital Employed	PBIT/Capital Employed
.....	Return on Investment	Operating Profit/ Capital Employed
.....	Return on Equity	Net Income/Shareholders' Equity

To understand the behavioral pattern of the selected capital structure and profitability variables, the following Table 3 presents the descriptive statistics of such financial variables for the five selected jute companies over the years 2009 to 2013:

Table 3: Descriptive Statistics

Variables	Range	Minimum	Maximum	Mean
Debt/Equity (D/E)	2.05	0.02	2.07	0.599
Debt/Capital (D/C)	0.41	0.01	0.42	0.194
Profit to Sales Ratio (PSR)	0.14	0	0.14	0.049
Return on Capital Employed (ROCE)	0.51	0.03	0.54	0.143
Return on Investment (ROI)	0.43	0.07	0.50	0.151
Return on Equity (ROE)	0.4	0	0.4	0.081

The descriptive statistics represent that over the period under study, the mean Debt/Equity ratio is 0.599 and Debt/Capital ratio is 0.194. It highlights that the companies are not having good proportion of debt-equity mix in their capital structure and are not in good position as far as capital gearing is concerned. Further, the minimum and maximum levels of the profitability variables—PSR, ROCE, ROI and ROE do not depict a sound financial performance of the jute companies over the period of study. This signifies that the selected firms are somehow suffering from low profitability, and it calls for further analysis on whether their capital structure composition adds to more chaos or not. Accordingly, the correlations between the capital structure and profitability variables are examined as shown in the next table.

Table 4 indicates that the relationship between the selected capital structure and profitability variables is negative, but not significant in any of the cases. The negative association points towards an unsuitable debt-equity mix in the capital structure of the

concerned companies thereby having a negative impact on the select profitability variables. The descriptive statistics of the selected variables prove that the firms can be considered to be in low geared position, and hence are somehow failing to channelize or utilize the capital employed properly to get the proper leverage effect, or there may be other internal reasons which are responsible for the continuous poor profitability of the firms, which originate the scope for further research in this area.

Table 4: Correlation Matrix between Capital Structure and Profitability Ratios

Variables		PSR	ROCE	ROI	ROE
D/E	Pearson Correlation	-.877	-.433	-.547	-.296
	Sig. (2-tailed)	.051	.466	.340	.629
	N	5	5	5	5
D/C	Pearson Correlation	-.867	-.606	-.719	-.470
	Sig. (2-tailed)	.057	.278	.171	.424
	N	5	5	5	5

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Now the detail of the test results of the propositions become contextual to conclude some remedial measures so as to overcome the existing situation, and the following table shows the test results accordingly.

Table 5: Test Results of Propositions

Propositions	Pearson Correlation
P ₁ : There exists a relationship between Debt to Equity and Profit to Sales Ratio.	-0.877
P ₂ : There exists a relationship between Debt to Equity and Return on Capital Employed.	-0.433
P ₃ : There exists a relationship between Debt to Equity and Return on Investment.	-0.547
P ₄ : There exists a relationship between Debt to Equity and Return on Equity.	-0.296
P ₅ : There exists a relationship between Debt to Capital and Profit to Sales Ratio.	-0.867
P ₆ : There exists a relationship between Debt to Capital and Return on Capital Employed.	-0.606
P ₇ : There exists a relationship between Debt to Capital and Return on Investment.	-0.719
P ₈ : There exists a relationship between Debt to Capital and Return on Equity.	-0.470

CONCLUSIONS AND SUGGESTIONS

Industrial firms do conduct business in a highly complex and competitive business environment today. Financial problems persisted before and will always be there, and if an industrial firm has to move on, it should prepare itself to tackle such challenges and maintain its sustainability. In this context it may be said that holding of a sound capital structure is an essential pre-requisite for staying fit and maintaining profitability in this complex business world. In an attempt to analyze the impact of capital structure on profitability of five listed jute companies in India over a five year period from 2009 to 2013, the present study shows that the firms under consideration do not have sound debt-equity composition in their capital structure and hence have failed to enjoy the benefits of leverage properly. Furthermore, a number of important issues have come up while analyzing the financial statements of the selected companies, some of which are like a major portion of the company's net worth is represented by reserves and surplus, current assets include good amount of closing stock, long term debt capital assumes a very small portion of total capital etc. and most importantly the existing sales, PBIT and cash flow levels are not significant enough to put positive impact on profitability of the concerned firms. From these it can be concluded that too much dependence on internal capital certainly reduces the financial risk of the firm, but at the same time it makes the jute companies unable to reap the benefits of financial leverage and capital gearing and all these causes have invariably put a negative impact on the profitability of the jute companies year after year and are posing a serious threat to their long term sustainability too. So, focus should be given on the following areas to improve the existing situation in order to have positive impact on profitability of the jute companies in the coming years.

- Internal factors such as policy in the firm, regarding support price, tax holiday, can be worked upon, so as to enhance sales and profitability. This would encourage budding entrepreneurs in jute industry.
- As far as the existing average debt-equity mix and debt-capital proportion of the selected firms are concerned, the firms have scope to increase the proportion of debt in total capital; but they must first assure themselves of moderate and stable cash inflows in future.
- Banks and financial institutions may be encouraged to provide low cost term finance to the jute companies so that an appropriate mix of capital structure can be adopted in order to increase the overall profitability.

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CORPORATE GOVERNANCE AND FIRM PERFORMANCE: A LITERATURE REVIEW

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ABSTRACT

Corporate governance is often regarded as a main driver of firm performance. However, previous studies often discover contradicting findings about the causal effect of corporate governance mechanisms on firm performance. This paper reviews an immense body of literature devoted to evaluating the relationship between corporate governance and performance as measured by valuation, in the various countries of world. Most of the evidence to date suggests a positive association between corporate governance and various measures of performance. Studies also find that major work in this regards was done in developed countries and few studies is conducted in developing countries.

Key Words: Corporate Governance, Firm Performance

INTRODUCTION

Corporate Governance has become a central issue of policy debate for more than 3 decades now. The concept of corporate governance is gaining importance these days in the developed as well as in the developing nations of the world. The need of this has been realized after the failure of business giants such as Enron, Xerox, WorldCom and Tyco, Satyam etc., in USA, UK and India. It is considered to be different from corporate management. Management is concerned with the running of the corporations and the governance aims to ensure that the corporation is running in a fair and transparent manner to the best interests of all the stakeholders who are directly or indirectly attached to it.

Integrity, ability and cohesiveness of the members of the board, fairness on the part of management, quality of corporate and financial reporting and the participation of all the stakeholders in decision making process is the measure criteria for quality of corporate governance. The board of directors, management officials and the shareholders are the main players in corporate governance. In the corporation form of business organization there is a separation of ownership control and management. In this situation boards of directors are considered to be powerful instrument in corporate governance matters. Since the owners of the company i.e. the shareholders belong to far and wide places, so it becomes difficult for them to keep check on each and every activity of the company to

which they belong. Hence, the separation of ownership, control and management in joint stock companies causes certain costs to incur. The mechanism of corporate governance and the type of information about corporate decisions on the one hand and on the other hand, the performances of the firm and the information that the corporation should make public, constitutes major issues of discussion in the corporate governance debate. Specifically, the issue of making corporate financial reporting more transparent to the stakeholders, and the extent to which, the oversight bodies set to oversee the firms becomes functional. The practice “good corporate governance” is seen as the ultimate objective of studies in this area, which the neoclassical theory of market economy defines as the maximization of shareholders’ value.

In this paper researcher has tried to focus on corporate governance practices and firm level performance. Based on the available evidence, the key question the survey aims to address is whether voluntarily chosen corporate governance provisions have an impact on firm performance. Most of the work in this literature has been done on developed countries, especially the US, Canada, Japan and United Kingdom; there is a rapidly growing strand of literature that focuses on comparing governance across countries. This survey includes key papers in both – developed economies and emerging markets also.

REVIEW OF LITERATURE

Fama (1980) believed the firm as team, and put emphasis on productivity of each member of team. Thus, within the firm, each manager has the incentive to monitor the behavior of other managers, whether subordinates or superiors. Secondly, Fama (1980) argues that manager reward should be linked with the performance. An analysis of the principal-agent problem research was carried out by Grossman and Hart (1983). In agency models, a divergence in the interests of managers and shareholders causes managers to take actions that are costly to shareholders. Contracts cannot preclude this activity if shareholders are unable to observe managerial behavior directly, but ownership by the manager may be used to induce managers to act in a manner that is consistent with the interest of shareholders. Furthermore, Capon et al (1990) explained a positive and significance relationship between firm performance and industry concentration, growth in sales, capital investment intensity and advertising. On the contrary, they observed negative relationship between firm performance and debt. However, they revealed insignificant relationship has been found between firm performance and size and firm control (owner V/S Manager). On the other hand, Maher and Anderson (2000) examined the strengths, weaknesses, and economic implications associated with various corporate governance systems in OECD countries. Each country has tough time developed a wide variety of mechanisms to overcome the agency problems arising from the separation of ownership and control. They have discussed the various mechanisms employed in different systems (e.g. the market for corporate

control, executive remuneration schemes, concentrated ownership, and cross-shareholdings amongst firms) and assess the evidence on whether or not they are conducive to firm performance and economic growth. Also, Mitton (2001) made study on 398 selected firms of Korea Malaysia, Indonesia and Philippines and Thailand. The study concluded that the corporate governance has the strong impact on firm performance during East Asian crisis in 1997 to 1998. The study also concluded that the price performance is connected with the firms that are having higher disclosure quality, higher outside ownership concentration and focused rather than diversified.

Baek et al (2002) revealed that in Korean financial crisis firm with higher disclosure quality and alternative sources of external financing also borne loss. Against of it Chaebol firms with focused ownership by controlling family shareholders experience a huge decrease in the value of their equity share. The study concluded that downsizing actions during the crisis have a positive effect on the value of chaebol firms. Also, the effect of Corporate governance on firm performance may vary depending on the country-specific level of investor protection was the research findings of Klapper and Love (2002). They further finds that firms with relatively good governance practices are likely to be more highly valued by investors in countries where investor protection is generally poor. Baur, Gaunster and Otten (2003) studied that whether good corporate governance enhances the value of stock returns and value of firm in Europe, for the study sample size was of 300 firm of FTSE Europe. The portfolio was constructed of well governed and poorly governed firm and its performance. The study revealed that the positive relationship between corporate governance and value of the firm.

Gompers (2003) constructed a summary index of corporate governance, which included all provisions reported by the Institutional Investors Research Center (IIRC). They coined the terms democracies and dictatorships. In the first category, they included firms that are shareholder-friendly, while the second category comprises firms that are Manager-friendly. They found that democracies have higher Tobin's q ratios and better operating performance than dictatorships. Furthermore, they reported that democracies earned higher positive abnormal returns than dictatorships. McKinsey (2003) made survey of 200 institutional investors and the importance of corporate governance in corporate houses and the agency found d that found that 80% of the respondents would pay a premium for well governed companies. The research has been able to capture a perceived interest of investors that are willing to pay premium for good corporate governance.

Drobtz et al (2004) found that governance ratings are positively related to firm valuation and a zero-cost trading strategy that shorts firms with low ratings and buys firms with high ratings that leads to an annualized abnormal return of 12% over the sample period. Brown and Caylor (2004) created a broad measure of corporate governance, Gov-Score, based on a new dataset provided by Institutional Shareholder

Services. Gov-Score is a composite measure of 51 factors encompassing eight corporate governance categories: audit, board of directors, charter/bylaws, director education, executive and director compensation, ownership, progressive practices, and state of incorporation. They related Gov-Score to operating performance, valuation, and shareholder payout for 2,327 firms, and found that better-governed firms are relatively more profitable, more valuable, and pay out more cash to their shareholders. They also examined which of the eight categories underlying Gov-Score are most highly associated with firm performance. Silva et al (2005) found significant difference between the voting and total capital owned by the largest shareholders mainly through the existence of non-voting shares. They also found that firms with good corporate governance practices have significantly higher performer. The relationship between Tobin's Q and good governance practices are positively but statistically insignificant. Roy et al (2006) revealed that voluntary code of conduct of corporate governance in developed markets has no significant impact on value of firm. In the same light, Black and Kim (2006) supported the evidence of the causal relationship between an overall governance index and higher share prices in emerging market.

Bhagat and Boltan (2007) measured interrelationship among corporate governance, corporate performance, corporate capital structure and corporate ownership structure. They concluded that good governance and operating performance of selected firms are positively correlated with significant difference. The study also revealed that disciplinary management turnover is positively correlated with stock ownership of board members and board independence. Furthermore, Tandililin et al (2007) studied the correlation among corporate governance, risk management and bank performance. They have collected sample of 51 banks of Indonesia with study period of 1999 to 2004. They have used both types of data primary as well as secondary. Their study explained that bank ownership impacts both the relationship of corporate governance and bank and corporate governance and risk management. It is important to mention that triangle gap model used in this study shown no linear effect of corporate governance on bank performance. Also, Dharmapal et al (2008); Love and Andrei (2008) revealed that a large and statistically significant positive effect of the governance reforms in combination with sanctions. However, it is vague whether the impact of sanctions occurred through the anticipation of formal enforcement or through some other mechanism. Chaklader (2009) found significant relationship between value of firm and independent parameters like growth in sales, promoters' holding, financial leverage liquidity and dividend payout ratio.

On the contrary, Gupta et al (2009) worked on corporate governance and firm value; evidence from Canadian capital markets. In this paper they have explained the connection between the composite scores of corporate governance and various indicators of firm's value. The study period was from 2002 to 2005. They have tested sampler of 200 firms of TSX/S & P index. Their study revealed that there is no

association between CG scores and values of firm. Furthermore, Sarvanan (2009) found insignificant difference between value of firm and promoters' family control and non-promoter family controlled firms, by using t- test.

The literature showing positive relationship between corporate governance and performance of the firm, was supported by the work of Bauer, Eichholtz and Kok (2009). The depth of this relationship was carried by Shah (2009) in the context of developed (US) and developing economy (Pakistan). Areas tested in this study are the dividend policy, capital structure, internal and external performance, and multifactor model of publicly traded companies in Pakistan. A specially constructed CG Scorecard and individual corporate governance factors have been used as the measures of corporate governance for the Pakistani perspective and the corporate governance index has been used for the analysis in USA. The result of study concluded that Pakistani firm has positive relationships between managerial ownership, institutional ownership, and CEO duality with dividend payout. Same conclusion also found in the United States firms.

Even the control measures could be focused by looking at this relationship. Sulong et al (2010) focused on monitoring and controlling function of corporate governance mechanisms such as dividend, types of ownership structure and board governance to examine its effectiveness in controlling managerial opportunism to reduce agency costs and enhance firm's valuation in the Malaysian post corporate governance reformed period. Balasubramanian et al (2010) found a positive and statistically significant association between Indian corporate governance index and firm's market value, on a sample of 26 firms of the BSE- 30 index and 131 firms of the BSE-200 firms and a smaller number of firms from BSE-500 index. They also detailed the information about governance practices of Indian public firms. Moreover, Arora (2010) revealed strong influence of corporate governance on performance in Indian context. Empirical evidence provided by Chaklader (2011) revealed that distribution of dividend and promoter's holding found to be significant with positive coefficient. On the other hand value of firm was affected by growth in income in the financial sectors. The study included use of Tobin's Q as dependent variables and growth in sales, promoter's holding, financial leverage liquidity and dividend payout taken as independent variables.

Yasser (2011) concluded that better governed firms are relatively more profitable, more valuable, and pay out comparative extra dividend to their shareholders and most prominently ensure sustainability. He created a Corporate Governance Index (CGI), in line with the studies of Gompers, Ishii & Metrick (2003) and Brown & Caylor (2004) and international best practices in corporate governance, to measure the accessible level of corporate governance practices being followed by the listed companies in Pakistan.

There has been research findings have documented a strong relationship between corporate governance and firm value in Indian firms in the study of Bhayani (2013). A result of analysis further indicates that firm value of the firm is also influenced by

corporate governance indicators and found sound relation with them. The result of study indicates lack of relation of outside directors on board and firm value. Bhayani (2013) has tried to study the impact of corporate governance on firm value for Indian firms listed in BSE 200 index for the period of 2009-10 to 2011-12. For the purpose of analysis financial and market based performance indicators are used in relation to governance – performance relation. For the purpose of analysis pooled regression analysis techniques used.

CONCLUSION

There is a vast body of literature devoted to evaluating the relationship between corporate governance and performance, measured by valuation, operating performance or stock returns. Despite the large number of papers, there no consensus yet? Most of the research to date suggests a positive correlation between corporate governance and various measures of performance. However, there are a number of studies that have questioned such a relationship. This calls for more research in this area.

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KEY ECONOMIC VARIABLES AND STOCK MARKET IN INDIA

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ABSTRACT

This study investigates the nature of the casual relationship between the stock prices and key macro economic variables representing financial sector of the economy for the year 1999-2012, using quarterly data of Bombay Stock Exchange- BSE- 100. These variables are gross domestic product and inflation. Quarterly data have been collected from 37 companies consistently listed in BSE-100. Augmented Dickey Fuller Test has been applied to make the data stationery. Bi-variate correlation has been applied to test the relationship between macro economic variables. Bi-variate correlation has been applied to check the relationship of individual macroeconomic factor of Indian economy to individual company. Granger causality has been applied to test the existence of relationship between two variables. Linear relationship was applied to establish cause and affect relationship between selected macro economic variables as independent variable and stock returns as dependent variables. The results of the study reveal that inflation does not affect stock market volatility and gross domestic product affects stock market volatility.

Key Words: Macro economic variables, stock market

INTRODUCTION

The movement of stock prices depends on the economy's macro fundamentals and accordingly on the expectations of the investors about future prospects. These expectations are driven by macro variables, which may be formed adoptively or rationally on fundamentals of economy. Since 1991, Indian capital market has gone through tremendous change, when the government of India has opened its gate through liberalization, privatization and globalization. As a result for the aggregate economy capital market has got its growing importance.

The growth of output in any economy depends on the increase in the savings and investment to a nation's output of goods and services. The financial market helps in the financial diversion of rising current income into savings/ investments. Indian financial markets have evolved significantly over several hundred years and are undergoing changes and innovations to improve liquidity. The capital market and the money market

are both growing rapidly in there in the own way. The most famous capital market of India, Bombay Stock Exchange is growing sharply.

There have been many studies on these relationships during past few years. However there is a need to implement more linear techniques as stock price movements is to be better captured through these methods. This knowledge will benefit directly identified beneficiaries. If practitioners and academicians understood the macro variables, which influence the stock prices and also the kind of relationships, then predicting and understanding the behavior of stock market would be much simpler with the help of these macro economic variables. With the help of this knowledge the manager or the investor may make appropriate managerial or investment decisions or policy makers may try to influence the capital market.

REVIEW OF LITERATURE

Varying evidence of casual links of stock returns and macro variables have been found in the literature using various asset pricing specifications. In the context of macro dynamics of stock returns APT assumes that returns are generated by a number of macroeconomic factors. It allows multiple risk factors to explain asset returns. An issue that is the subject of intense debate among academics and financial professionals are the Macro Economic Factors and Its Impact on Capital Market. Stock market returns can be predicted by macro economic variables as noticed by several researchers through empirical evidences. The result or the outcomes of the various studies vary depending upon the scope of the studies and the factors considered. All the studies have considered different economic variables and used different econometric techniques to find the relationship between macroeconomic variables and stock prices. Irving Fisher (1930) noted nominal interest rate is decomposed into an expected real rate and an expected inflation component. Likewise Sharma Kennedy (1977) and Sharma (1983) test the weak-form efficiency of the BSE. Both of these studies with the former covering the 1963-1973 period and the later encompassing the 1973-1971 period, conclude that Indian stocks generally conformed to random-walk behavior in that successive period changes were independent. In the same way Firth (1979) for UK and Adam and Tweneboah (2008) for Ghana report a significant positive relationship between inflation (CPI) and stock returns. Similarly Fama (1981) observed negative relations between real stock returns and inflation observed during the post-1953 period were the consequence of proxy effects. Empirically, Atje and Jovanovic (1993) found strong evidence to support the view that stock market development leads to economic growth. Likewise an important study in this field was done by Mukherjee and Naka (1995) Vector error correction and co-integration techniques were used to testify a model of seven equations. A negative relationship between inflation and equity prices were found. Similarly an important study for the Japanese economy was done by Asai and Shiba (1995) investigated using Toda and Yamamoto (1995)'s vector autoregressions (VAR)

specification and concluded that macroeconomic variables do Granger cause the stock market variable, while reverse is not so clear and The lagged stock market variable affects its current value but its impact tend to diminish in the long-run. There have been several studies on this in Indian context Rao & Rajeswari (2000) try to explore the role being played by a good number of macroeconomic variables in influencing the stock market when reduced into a manageable number of economic factors. An important study was done in the context of Asian countries by Wongbangpo and Sharma (2002) suggested that, in the long-run, stock prices are positively related to growth in output. In the short-run, stock prices are found to be functions of past and current values of macroeconomic variables. Likewise Banerjee and Anwer (2006) examined the relationship between financial development and economic growth and concluded that stock markets act as an indicator of economic growth or not depend on the types of economy under considerations. In the case of developed economies like the US we may derive a positive correlation but when it boils down to developing nations like ours, it may be difficult to give any definitive conclusions. Malarvizhi, Thenmozhi, Jaya (2010) has focused amongst many macroeconomic factors, the movement of GDP as it plays a crucial role. The cointegration and Pair wise granger causality test surfaces the fact that there is a bidirectional causal relationship between GDP and NIFTY, i.e. changes in stock market will affect GDP and vice versa.

OBJECTIVES

The main objective of the study was to find out the interrelationship between macro economic factors and capital market and therefore the study investigates the impact of GDP on capital market movements and also to know the impact of inflation rate on capital market movements.

HYPOTHESES

H0₁- There is no significant impact of GDP rate on capital market movements.

H0₂- There is no significant impact of inflation rate on capital market movements.

RESEARCH METHODOLOGY

The research study is descriptive in nature. The study focused on finding out the impact of macroeconomic variables on capital market. For the purpose of the study the selected macro economic variables are GDP, inflation, For the purpose of statistical analysis the companies which are consistently listed in BSE-100 for the period 1999-2012 has been taken. The study is mainly based on the secondary data. The quarterly prices of the selected macro economic variables and stocks of thirty seven companies consistently listed in BSE-100 have been taken.

Time series analysis must be based on stationary data series for drawing useful inferences. Broadly speaking a data series is said to be stationery if its mean and

variance are constant over time and the value of covariance between two time periods depends only on the distance or lag between two time periods and not on the actual time at which the covariance is computed. The correlation between a series and its lagged values are assumed to depend only on the length of the lag and not when the series started. This property is known as stationarity and any series obeying this is called stationary time series.

A unit root test has been applied to test whether a series is stationary or not. Stationarity conditions have been tested using Augmented Dickey Fuller test (ADF).

Table 1: Statistics for Augmented Dickey Fuller Test

Stationarity	Macro Economic Factor	Exogenous Variable	T	Probability	Durbin Watson	Akaike	Schwarz
II Difference	GDP	None	-5.81	0	2.09	17.21	17.49
Log I Difference	Inflation	Trend & Intercept	7.20	0	1.98	2.69	2.80

Bi-variate Correlation was applied to test the relationship between the macro economic variables. Bi-variate correlation was applied to check the relationship of macroeconomic factor of Indian economy to individual company.

Granger causality was applied to test the existence of relationship between the two variables.

Table 2: Statistics for Granger Causality Test between Macro Economic Factors causing/ Not Causing Average stock Returns

Hypothesis	Direction of Causality	Log	F	P	Remark	Conclusion
Hypothesis 1	DStock does not cause DDGDP	2	1.95	0.15	Accepted	GDP has caused stock
Hypothesis 2	DDGDP does not Granger DStock		3.61	0.03	Rejected	
Hypothesis 3	Dstock does not granger cause DInflation	1	14.201	0.0005	Rejected	Inflation does not cause in stocks
Hypothesis 4	Dinflation does not granger cause DStock		0.39808	0.5311	Accepted	

The results presented in the above table shows that only GDP has caused in stocks i.e responsible for stock volatility. Linear regression was applied to establish the cause and effect relationship between selected macro economic variables of the economy GDP and Inflation as independent variables and stock returns as dependent variables.

Various descriptive statistics are calculated of the variables under study in order to describe the basic characteristics of these variables. In the table given below various statistics are calculated like mean, median, maximum value, minimum value and standard deviation.

Table 3: Descriptive Statistics

Variables	Mean	Maximum	Minimum	S.D
GDP of Indian Economy	9009.27	22245	3901	19970000
Inflation	5.23	11	0	7.351

The table above shows that amongst the two major economic factors the most influencing factor is GDP. As the mean value of inflation rate is 5.23, it shows the low of 0 and high of 11 and standard deviation is 7.35. In applying correlation we recognize three different possibilities. The two set of variables may show a positive correlation or negative correlation and finally no correlation.

Table 4: Correlation Statistics

	GDP	Inflation
GDP	1	.57
Inflation	.57	1

The bivariate correlation reported between GDP and Inflation rate of Indian economy is statistically not significant as the value of Pearson coefficient correlation is 0.577 which is significant at 0. This suggests that there is no association existed between GDP and Inflation.

The regression analysis indicated that GDP is the superior indicator of stock market volatility. As out of thirty seven consistently listed companies of BSE-100, twenty six companies stock prices are affected by the changes in the GDP of Indian economy (ABB Ltd., ACC Ltd., Ambuja Cements Ltd., Ashok Leyland Ltd., Bank of Baroda Ltd., Bank of India Ltd., Bharat Petroleum Corporation Ltd., Bharat Heavy Electricals Ltd., Cummins India Ltd., Dr. Reddy's Laboratories Ltd., Glaxosmithkline Ltd., Grasim Industries Ltd., Hindustan Petroleum Corporation Ltd., IDBI Bank Ltd., Infosys Technologies Ltd., Mahindra & Mahindra Ltd., Ranbaxy Laboratories Ltd., Reliance Industries Ltd., Reliance Infrastructure Ltd., Steel Authority of India Ltd., Siemens Ltd., State Bank of India Ltd., Tata Chemicals Ltd., Tata Motors Ltd., Tata Power Co. Ltd., Tata Steel Co. Ltd.).

Further regression analysis reported for inflation that out of thirty seven consistently listed companies of BSE-100, fifteen companies stock prices are affected by the changes in the inflation rate of Indian economy (ACC Ltd., Bank of Baroda Ltd., Bank of India Ltd., Bharat Petroleum Corporation Ltd., Bharat Heavy Electricals Ltd., Glaxosmithkline Ltd., Grasim Industries Ltd., IDBI Bank Ltd., Mahindra & Mahindra Ltd., Reliance Industries Ltd., Reliance Infrastructure Ltd., Steel Authority of India Ltd., Tata Chemicals Ltd., Tata Power Co. Ltd., Tata Steel Co. Ltd.).

CONCLUSION

The study examines the relationship between Indian stock market and a set of macroeconomic variables during the period of January 1999- to august 2012. The time series data set employed in this study comprises the quarterly observations of the BSE-100, GDP and inflation.

Although there is a moderate correlation between the two and descriptive statistics indicates a much higher expansion in the stock market variable than real economic variables. The study used Augmented Dickey Fuller Test to make the data stationary. The study used correlation test to determine the kind of relationship between the selected macro economic variables of the Indian economy and companies consistently listed in BSE-100. The study also used Granger causality test to determine the causal effect relationship between companies listed in BSE-100 and selected macro economic factors of the economy. Granger causality test carried out in order to assess whether there is potential predictability power of one indicator over the other. Statistical inferences are drawn from the data by means of significance test and unidirectional causality is seen between them. GDP do granger because stock returns, while inflation does not granger because stock returns. According to the regression test the macro economic factors that affects the most stock returns volatility is GDP while inflation does affect but with a low frequency.

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MANAGING NPAs: IS WRITE-OFF AN ONLY SOLUTION?

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ABSTRACT

The NPA account not only reduces profitability of banks by provisioning in the profit and loss account, but also increasing carrying cost, which results in excess & avoidable management attention. Banks have been suffering from losses since last four decades due to relaxed lending standards, unguaranteed credits, the influence of the 1980s culture, and the borrowers' perception. This case is an attempt to focus that bankers should make a fairly accurate personality-morale profile assessment of prospective and current borrowers and guarantors. Besides considering personal interaction, the banker should try to draw some conclusions about staff morale and loyalty, study the person's personal credit report, do trade-credit reference checking, check references from present and former bankers, and determine how the borrower handles stress. In addition, banks can minimize risks by securing the borrower's guarantee and using Government guaranteed loan programs.

Key words: NPAs, Banking sector, write-off, Provision, India

INTRODUCTION

It was 31st December 2013, the last day of calendar year, when Mr. Palash Ramchandran joined as a branch manager in the Titharia branch of XBI. Titharia is a town and a nagar panchayat in Tamoh district in the Indian state of Madhya Pradesh. Agriculture and farming is the main and only occupation of the citizens of the town. Mr. Palash Ramchandran was familiar with this, as he has collected all the information regarding the local surroundings because he was going to explore this new area. Before joining here Mr. Palash has an experience of 15 golden years as a field officer (Loan officer) in various parts of the State. But somewhere he was sure the story will not be so much different here and his doubt came true after spending more than a week on previous financial reports, auditors' reports, individual customers records, inspections reports etc. Palash was already baffled by the current situation of branch and its business, but he also realized that this was the correct time to make use of his experience.

BUSINESS PROBLEM ANALYSIS AND DECISION

Overall, there were three staff members in the branch including one field officer Mr. Rajendra Kaushal, one window clerk Mr. Sajan Bhagat and a peon Mr. Hariprasad. Only Hariprasad was the local person and was very fluent in vernacular language. The problem before Mr. Palash was to optimally utilize the capabilities of staff members to mitigate the losses of the branch. As he already did exhaustive study of branch business, he decided to come up with an idea to provide the services of offering loans, advances and their settlement at the borrowers' place. Because he realized that, the matters of loans and advances can't be settled all under one roof. Branches should be service oriented. This would lead to attract new customers and satisfy the existing. This triggered a thought process in his mind and hence he designed a working policy of branch. He located himself for three days field working and other three days Mr. Rajendra replaced him. Now Hariprasad also had something new to do from his routine job as he served half of his every working day in the field with Mr. Palash and Mr. Rajendra while Mr. Sajan Bhagat managed the window banking in the branch premises.

The problem of rising non-performing assets (NPAs) is very common in Indian banking sector and the writing off these through making provisions from profits is also a routine practice. Mr. Palash was very much aware about this traditional approach of banking that the write-off reduces the bank's earnings and thereby reduces its taxable income. This accounting procedure may reduce the bank's overall tax liability, which is the goal of a write-off. But he wanted to get rid of this conventional mechanism.

BUSINESS SOLUTION: AN INNOVATIVE APPROACH

Palash believed in the regular monitoring of recovery of loans therefore first and foremost action he took to provide regular counseling sessions to the defaulters. He further explained them about the three legal options available to banks for resolution of NPAs/recovery of loans are; the Securitization and reconstruction of financial assets and enforcement of security interest Act, 2002 (SARFAESI Act, 2002), debt Recovery tribunals and Lok adalats.

He never wanted that a loan be written off after making 100 per cent provision. However, this also helped banks to show lower gross NPAs and impaired bank's profitability. He wanted to overcome this conventional system and replaced it with an innovative approach; he offered some new scheme eg; opened savings accounts with minimum balance of Rs.500, started to offer locker facility and promoted recurring deposits schemes. This way Mr. Palash arranged a good amount and securities as funds in the accounts of those borrowers who owed money from the branch. Now the branch was steadily coming in the position with right of offset against the loans advanced.

He conducted many camps in surroundings areas under the scheme announced by the Govt. of India. The scheme aimed at waiving the outstanding loans of small and marginal farmers with landholdings of less than two hectares. Farmers with holdings of over two hectares were eligible for a one-time settlement rebate of 25% of their outstanding loans, subject to the condition that the remaining 75% will be paid in three yearly installments. No interest will be charged on the outstanding amount. It worked tremendously. Later on, Mr. Palash and his teammates estimated 45% of the NPAs resolved and 40% of outstanding loans turned into partly secured and remaining 15% granted relief against their loans.

Overall it was not as easy as pie, Mr. Palash Ramchandra and his team bent over backwards to pull the train on track, although, much more to do ahead but the results came in favour and reflecting some hope that branch will be a profit earning branch with expected recovery of NPAs.

Questions:

1. Discuss the various options to manage the NPAs.
2. Define the role of Consumer counseling Camps in Branch Banking System.
3. Creation of provision from profit for writing off NPAs is an ethical practice, Comment.
4. Illustrate some of the example from real world whereby credit risk evaluation turned the organization.

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*Teaching notes will be available on request

Report of
THE 37TH ALL INDIA ACCOUNTING CONFERENCE AND
INTERNATIONAL SEMINAR ON ACCOUNTING EDUCATION AND RESEARCH
Organized by Department of Commerce, University of Lucknow
And IAA Lucknow Branch
(November 8-9, 2014)

The Conference was inaugurated by Shri. Kalraj Mishra, Honorable Union Minister of Micro, Small and Medium Enterprises, Government of India and the Guest of Honour, Prof. Dinesh Sharma, Mayor, Lucknow City.

Prof. Arvind Kumar, Conference Secretary, greeted the dignitaries and all the guests. He appreciated the structure of the organisation and talked about its longevity and sustenance. The main focus of the inaugural session was to felicitate the Retired Teachers of the faculty, who continue to be the guiding light for the University. The Retired Teachers who were felicitated with shawls and bouquets were Prof. K. K. Saxena, Prof. R. K. Tripathi, Prof. B. K. Nigam, Prof. K. L. Maheshwari, Prof. R.S. Rastogi, Prof. H. O. Gupta, Prof. Siyaram Jaiswal, Prof. H. C. Srivastava, Prof. J.N. Shukla, Prof. G. N. Mehrotra, Prof. R.S.Yadav, Prof. Nar Singh and Prof. Y. P. Singh, Ex Head and Dean, Department of Commerce, Delhi School of Economics.

Prof. G. Soral, General Secretary IAA, in his address appreciated the Awadhi culture. While mentioning about Indian Accounting Association, he pointed out that the Association was found in Uttar Pradesh and currently has 44 branches with more than 4100 members. He further talked about affiliation of IAA with American Accounting Association, IAA Research Foundation, and National Accounting Talent Search being annually organized by the association.

Prof. S.S. Modi, President IAA in his presidential speech mentioned that higher education in India is in a phase of transition. He talked about how IAA is geared up towards research and educational development. He appreciated the team efforts of the IAA Executive reflected in various reforms in the association. He further threw light on different activities aligned in this two-day event. Prof. Shurveer S. Bhanawat, Deputy Coordinator, NATS, then declared the NATS awards which were collected by winners who arrived from various parts of the country.

Prof. Bhabatosh Banerjee, President IAA-Research Foundation in his Keynote Address discussed the inter-linkage of education, research and practice in accounting among which research has prime importance. He talked about the factors like Economic, Environmental, Technological and Regulatory that directly influence the accounting education and research. Though India is the second largest country with accounting professionals but the standard of education in this field needs to be enhanced. He concluded the speech with the quote of Sir Windson Churchill "This is not the end, it is not the beginning of the end but it is, the end of the beginning." Thereafter, the Souvenir was released.

The guest of Honour, Prof. Dinesh Sharma, Mayor, Lucknow City in his address said that the organisation of this event was a monumental achievement for the Department of Commerce and the University of Lucknow. A book entitled “Financial and Advanced Accounting” authored by Prof. Arvind Kumar, Dean-Faculty of Commerce, University of Lucknow, was also released.

Chief Guest Hon’ble Minister Shri Kalraj Mishra, Minister of MSME, Government of India, in his enlightening speech said that effective accounting has a big stake in economy through which fraudulent practices can be detected and rectified. This would benefit the common man by enabling development to proceed at a higher trajectory. He also highlighted the importance of Prime Minister Shri Narendra Modi’s “Make in India Programme”, in which the international standards of production are to be adhered to thereby enhancing production and encouraging entrepreneurship.

In his presidential address, Prof. S.B. Nimse, Vice-Chancellor, University of Lucknow, congratulated the organizers and hoped that the Conference will focus on global aspects of accounting, incorporating all the changes in International Accounting Standards so as to convert the slogan of Make in India into a reality. He wished that the event shall be beneficial to academicians, students, business and government.

At the end, of Inaugural Session, Vote of Thanks was proposed by Prof. Pushpendra Mishra, Organising Secretary, Master of the Ceremony was Prof. Madhurima Lall, and Chief Co-ordinator was Dr. Sunita Srivastava.

Technical Session I: Creative Accounting

The session was chaired by CA K. Ch. AVSN Murthy, Chartered Accountant, Hyderabad, The chairperson opened the session by stating that in all 84 papers were accepted for the session wherein 19 were detailed, 50 brief and 15 posters presentations.

The keynote speaker Prof. V. K. Vasal, Professor, University of Delhi enlightened the audience with the idea of creative accounting. He said the origin of the concept is in accounting practice and not in accounting theory. He touched all the aspects of creative accounting i.e. historical, ethical and legal. He also said that IFRS requires true and clear view of the performance of accounting. He emphasized that creative accounting is not illegal, it is not fraud rather it is something permissible by law. He cited Satyam Case as an example. He stated that in this case creative accounting is not used; it is rather falsification and fraudulent accounting. The overall conclusion drawn from these papers was that the creative accounting is not always bad if it is within the legal framework.

Co-chairperson Prof. J. K. Jain Professor, Department of Commerce, Dr. Hari Singh Gaur University, Sagar, in his closing remarks congratulated the presenters for their presentations. In the end, Chief Coordinator Dr. Geetika Tandon Kapoor proposed vote of thanks. The Rapporteurs for the session were Ms. Aditi Tandon, Ms. Shreya Sheel, Ms. Astha Pathak and Dr. Vasudha Kumar

Technical Session II: Commodity Markets and Risk Management

The session was chaired by Prof. K. Eresi former Head Department of Commerce, Bengaluru University, Bengaluru, Past President of IAA. The Co-chairperson for the session was Prof. Sudhir Kumar Shukla, Head Department of Commerce, Mahatma Gandhi Kashi Vidyapeeth, Varanasi.

The keynote address was delivered by Prof. K V Achalapathy, Dean Faculty of Commerce, Osmania University, Hyderabad. The issues discussed in his address were trends and progress of commodity derivatives market, role of forward markets commission, role of market participants, trading, a comparison on trading, clearing and settlement mechanism, international linkages, opportunities and challenges in commodity derivatives and pricing of commodity futures.

12 detailed papers, 22 brief papers and 47 posters were submitted on the topic. Out of these 11 detailed papers and 15 brief papers were presented in the session.

The session concluded successfully. The main suggestions that came forward were:

It was observed that derivatives as a risk management tool have existed in India for more than a century. But the testing times have come now when the global economies are removing trade barriers gradually.

- The functioning has been distorted due to lack of understanding of the dynamic nature of the markets. This is the main challenge faced by the commodity and risk markets.
- The primary benefit of commodity futures market is that they provide hedging against price risk.
- Another important function is price discovery and they also provide support for credit needs to small producers.

The key note speaker concluded the session by directing the participants on studying the cause and effect relationship and refraining from material available on internet.

The Chief-Coordinator of the session was Dr. Anu Kohli, and the rapporteurs of the session were Dr. Nidhi Srivastava, Dr. Pooja Mishra, Dr. Ankita Pandey , Swati Yadav and Priyanka Majumdar.

Technical Session III: Accounting for Financial Instruments

The session was chaired by Prof. Daksha Chauhan, Dean Department of Commerce, Saurashtra University; Rajkot Co-chairperson was Prof. Kamna Sengupta, Department of Economics, University of Lucknow, Lucknow.

Prof. Prashant Kumar, Faculty of Commerce, Banaras Hindu University, Varanasi was the Keynote Speaker for the session. In his keynote address, he proposed that understanding the criticalities of the financial statements is very crucial. They should be made more understandable and revealing the true financial position. Primary and Compound financial instrument should be classified and provided the methods or recognition and de-recognition of the financial instruments in depth. There were 41

papers to be presented in the session which included 3 detailed papers, 14 brief papers and the remaining papers were presented as posters. In all, 11 papers were presented. Dr. Ritu Narang was Chief Co-ordinator of the session.

International Seminar on Accounting Education and Research

The International Seminar session was chaired by Prof. Ranjan K. Bal, Dean-Faculty of Commerce and Management, Utkal University, Bhubaneswar. He emphasized on the three pillars of accounting vis-a-vis education, research and practices. He stressed on the adoption of the International standards in reporting. He also mentioned that there is a need to introduce new areas of accounting like behavioral and lean accounting. The session was Co-chaired by Prof. B K Singh Professor, Faculty of Commerce, Banaras Hindu University, Varanasi.

The key note address was delivered by the Prof. Harish S. Oza, Ex Director and Professor, S.D. School of Commerce, Gujarat University, Ahmedabad. He talked about the four pillars of accounting namely economic, social, human resource and ethics. He stressed on a quote of Aristotle that "Educating the Mind without Educating the Heart is No Education at All". He added that we have to develop new accounting curriculum which can be beneficial to the students and acceptable in the market and appropriate for the global market.

In all, 85 papers were accepted for the seminar out of which 14 for detailed, 45 for brief and 27 for poster presentation. The theme of the seminar pivoted around the most crucial theme of Accounting Education and Research. It included papers relating to areas ranging from financial reporting, IFRS, environmental accounting, auditing, academic accounting and even human resource accounting.

K. V. Achalapati, Dean, Faculty of Commerce, Osmania University, Hyderabad in his concluding remarks opined that through globalization, IFRS have become an important subject today. More than 100 countries have accepted IFRS, however India is facing challenges in implementing these standards. Recently, the date of implementation for IFRS in India has been decided in 2016, which is more of conversion than adoption. He invited the young researchers to do more research on IFRS and reporting standards.

Co-chairperson Dr B. K. Singh observed that the presence of accountability which is the ethical issue is the most important aspect. The session came to an end by vote of thanks proposed by Dr. Archana Singh,. The rapporteurs were Ms. Astha Pathak, Ms. Aditi Tandon, Ms. Priyanka Majumdar, Dr. Ankita Pandey. Dr. Kaushiki Singh coordinated the programme.

Valedictory Session

During this session, Chief Guest Shri Mata Prasad Pandey, Hon'ble Speaker, Uttar Pradesh Legislative Assembly highlighted the need of practical application of the findings and conclusions of the conference. Guest of Honour was Prof. Nishith Rai, Vice Chancellor, Dr. Shakuntala Misra National Rehabilitation University, Lucknow. The Vice

Chancellor of University of Lucknow, Prof. S.B. Nimse was also present at the session along with the office bearers of IAA.

The presidential address was delivered by Prof. A.K. Sengupta, Pro-Vice Chancellor, University of Lucknow. Rapporteurs presented reports of various sessions of the conference and IAA Young Researcher award was given away. Finally, Prof. G. Soral, General Secretary, IAA proposed vote of thanks for the entire organizing team on behalf of the association. At the end, Prof Arvind Kumar, Conference Secretary thanked one and all for grand success of the mega event.

Prof. G. Soral
General Secretary

AWARD WINNERS

IAA YOUNG RESEARCHER AWARD 2014

Dr. Gagan Deep Sharma, Chandigarh

BEST PAPER AWARDS (37th all India Accounting Conference and International seminar)

- International Seminar on Accounting Education and Research:
Dr. Ratul Sarmah
- Technical Session on Commodity Markets and Risk Management:
Dr. K. Nirmala
- Technical Session on Accounting for Financial Instruments: (Joint)
*CA Neha Varyani
*Dr. Y Padmavati
- Technical Session on Creative Accounting: (joint)
*Dr. Prashant Atma
*Prof. Shurveer S. Bhanawat

NATIONAL ACCOUNTING TALENT SEARCH 2013-14

Senior Level	
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Second Best Performance	MAYANK SARAF, Kolkata
Third Best Performance	ANUJ VIJAY BHATIA, Vadodara
Junior Level	
Best Performance	SAJAN GROVER, Chandigarh
Second Best Performance	AYUSH SARAF, Kolkata
Third Best Performance	SUMIT SOLANKI, Jodhpur

BEST PERFORMING BRANCH/ CENTRE IN NATS 2013-14

First	SALEM
Second	COIMBATORE
Third	KOLKATA

**38TH ALL INDIA ACCOUNTING CONFERENCE AND INTERNATIONAL SEMINAR
ON ACCOUNTING EDUCATION AND RESEARCH
(December 5 - 6, 2015)**

CALL FOR PAPERS AND REGISTRATION

University Business School, Punjab University, Chandigarh and Indian Accounting Association, Chandigarh Branch considers it a privilege and a matter of great pride to host the 38th All India Accounting Conference and the International Seminar of Indian Accounting Association on December 5-6, 2015.

The conference would provide a forum for interaction on contemporary issues and Development in Accounting, Finance & Taxation to provide vital inputs for research in Accounting. It would create an interface among professionals, academicians and experts in the field of Accounting education & research in India and abroad.

Seminar and Technical sessions' details are as follows:

International Seminar on Accounting Education and Research

With Prof. Harish S. Oza, Formerly of Gujarat University, Ahmedabad as Chairman

Technical Session I: Role of Accounting in Building the Nation

With Prof. H. K. Singh, Maharishi University of Information Technology, Lucknow as Chairman

Technical Session II: Behavioral Accounting

With Prof. Lalit Gupta, Jai Narayan Vyas University, Jodhpur as Chairman

Technical Session III: Integrated Reporting

Prof. B. C. Sanjeevia, Formerly of Bangalore University, Bengaluru as Chairman

For registration, paper contribution and other

details, visit www.iaaconference.org or www.indianaccounting.org

Contact Person:

Prof. Karamjeet Singh

Conference Secretary, 38th All India Accounting Conference

University Business School, Punjab University, Chandigarh (Punjab)

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NOTES ON THEMES BY SESSION CHAIRPERSONS

International Seminar: Accounting Education and Research

We do not know the exact starting point of mankind in the history of human beings. Accounting is very old discipline. We found lot of information about accounting from the culture and civilization of mankind in the ancient era. The counting of various things is the first step of an accounting. The true fact is that accounting as a system had its origin long back and can be traced from the origin of human activity, particular, with economic activity. However, the origin of accounting may be traced to the double entry system as laid down by Luca Pacioli.

Accounting Education

I would like to quote Aristote, the great philosopher in the history of mankind. He said – **“Educating the mind without educating the heart, is no education at all.”** Our present education system is completely out of date. It is information based, not knowledge based. We have only theoretical knowledge of accounting and no idea about the practice of accounting. The researcher may right on development of new accounting curriculum, course content, and pedagogy and examination system.

Research in Accounting

Contemporary accounting research can be categorized into seven broad areas:

1. Financial Accounting & Its Reporting & Disclosures.
2. Cost Accounting & Its Effectiveness
3. Management Accounting & Its Usefulness
4. Taxation & Its Framework
5. Auditing & Its Practices
6. Financial Market & Its Other Related Areas
7. Accounting Choice & Its Decision Making

Technical Session: Role of Accounting in Building the Nation

In the late nineteenth century, professional accounting bodies were concerned mainly with the concept of recording related with insolvency, insurance, debt collection etc. Over the years, accountants have widened to cover costing and management information systems, fraud prevention, asset and business valuation and takeovers. As auditors and financial analysts, they provide value and supply chain management, portfolio investment analysis, project appraisal, assurance to risk management, governance and internal control process through high-quality corporate reporting.

The role of Accountancy in Nation Building through economic development covers mainly following areas:

1. Capacity Building
1. Global Standards
2. Sustainability

3. Integrated Reporting
4. Standards for Business

Accounting is as old as our civilization itself but the modern structure of accounting is based on double entry system, so financial accounting is around 600 years old. Accounting as a discipline is the most popular in business education but the least popular in the sphere of researches. It has contributed a lot in the national development especially infrastructural growth, social development, national income computation etc, but there is a dichotomy in India that parallel economic structure known as black money is prevailing and it needs transparency as accounting is concerned. Even for the new central Government of our country the biggest challenge and opportunity is to contain the black money and its accounting system. Accounting is a catalytic agent for national development and computerized accounting has provided paradigm shift due to its large memory. For the inclusive development of India, our accounting professionals should put more emphasis on human recourse accounting, social accounting, forensic accounting, revaluation accounting and so on.

Suggested sub-themes of technical session may be as-

1. Linkage between IT, Accounting & Economic Growth.
2. Accounting standards and their impact of nation building.
3. Global Finance Crisis & Accounting standards.
4. Bank and Insurance sector with special emphasis on accounting environment.
5. Convergence of Indian and International Accounting System.

Technical Session: Behavioral Accounting

We see 'Accounting' as a science of measurement (one of the major views of looking at) and communication, a universal and social activity. It is now recognized as an important indicator of economic development world over. CT Horngren has viewed it being the number one system for any economic activity. We relate accounting as an aid to management, more so a part of it, when it is supposed to play its dynamic and strategic role. The simple phrase in Management is 'what is not measurable cannot be managed'. The central issues of focus in management have been (more critical in present times): agency problem and related costs, goal congruence, organizational effectiveness coupled with OB inter alia problem of conflicts. So the problem of 'Management' is either to induce or bring about certain changes or to put a check on (to manage) typical behavior of all counter parts or interest groups. We also admit in our literature on 'Accounting Theory and Practice' that Accounting greatly influences, as well as, is influenced by both the environment and behavior to the extent of learning about the corporate personality. For what have the concepts or complete methodologies of ABCM, EVAM, BSC, VAS etc. been evolved and developed? Definitely, to either bring about changes in perceived behavior or to check it otherwise. Instances have revealed surprising changes in the behavior of workers simply by evolving a new method (tailor-

made and innovative) of 'collection and allocation of costs'. Therefore, if accounting claims for its prestigious place in today's complex strategic management, it must come forward to respond to OB and OT and so on and re-examine all its traditional and modern concepts and methodologies practiced mind it both intensively, theoretically and empirically. A simple example of FIFO or LIFO is already there in our mind. Accounting could instigate or control conflicts. In this regard, Creative Accounting is certainly a projection of Behavioral Accounting at both the Firm and Macro level. The concept and role of 'Theory' in general, and in Accounting stresses on providing the explanation, justification and prediction (predictability) of the action of accountants. Hendriksen (like the father of Accounting Theory in modern era) visualizes it at three levels as regards the 'predictability'. One of them is Behavioral Level broadly relating it to the role in decision-making or causing some impact thereon. The Conceptual Framework on Management Accounting (the Document) has regarded the 'Information' as a source of agent of production at par with land, labor, capital etc. Undoubtedly, most of it is made available by accounting. One major expectation of accounting is to facilitate social functions and control. In this backdrop, this branch of study helps to understand the impact of business processes, thought processes and human attributes imbibed in the accounting process of measurement and reporting on the value of a firm, currently and in the future as well. Behavioral Accounting is an offspring of Accounting and Behavioral Science i.e. application of behavioral theories to the accounting issues. Therefore, researchers in accounting today have to look at accounting, organizations and society, together, desirably in view of 'Images' (e.g. Belkaoui 1992) and 'metaphors' (e.g. Morgan G 1998).

Here, I come forward to suggest and encourage intense deliberations (group forums) by the advanced thinkers of Accounting and Management jointly, owing to the twin relationship and interdependence between the two. This implies taking up serious Group Research in order to enrich both the Academics and World of Practice in 'Accounting and Management':

- How to enrich the Philosophy (Foundations) of Management as also that of Accounting (like Images or Metaphors)? Possibly, for the development of their appropriate Theories relying on the eclectic approach in building a Theory for the inherent dynamism in their principles, tools and techniques. This would render compatibility in this interdependence. Dr. Vidhi Bhargav, of course in an unpublished PhD (on Empirical Properties of Financial Ratios, JNVU Jodhpur, 2004) discusses briefly, about this philosophical part of accounting.
- How to tackle the Accounting Issues in Management Perspective in order to help Managers in Indian Environment as noted by me in Accounting Policies – Theory and Practice (Lalit Gupta, Books Treasure, Jodhpur 1995, pp 43-45)?
- Accounting has already developed to the extent of an aid in the critical matters of HRM, Intangibles and Intellectual Capital. Should it bring the measurement of

behavior within the realm of Accounting with the help of fellow social scientists to address the present day problems of management?

I would, therefore, suggest to go for special sessions dedicated to 'Teaching and Research in Accounting' to be handled (preferably) exclusively by the teachers teaching Accounting in Management Programs.

Suggested sub-themes of technical session may be as:

1. Myopia of accounting.
2. Issues in Cost Control like Budgetary Control
3. CG and Enterprise Governance
4. MCS, Responsibility Accounting, Performance and Rewards related issues like how control is ducked, how accountability is avoided
5. Accounting and Text Management related behaviour of firms like transfer pricing
6. Behaviour related aspects of CSR, Corporate Disclosure, Corporate Finance, Financial Markets and Engineering
7. Financial Accounting for e.g. internal control
8. Impact of various tax-laws or reforms like IFRS, GST, Audit Reforms or the behavioural consequences of delay in their adoption
9. Mutual Impact of financial numbers and the net worth of a firm
10. Human Information Processing, judgment and decision making
11. Wide spectrum question sand dynamic areas of enquiry requiring BAR (Behavioural Accounting Research)

Papers (preferably with some case study) are invited for enriching this theme as an emerging branch of studies in accounting and management in India. Appropriate would be to send first an abstract of your idea in about 500 words, seek guidance and then develop the final paper. The end note of about fifty words must be on how do you claim it to fall in the field of accounting first and then on the theme. Please proceed as per the deadlines announced by the IAA executive or the conference secretary.

Technical Session: Integrating Reporting

Over the last 40 years, financial disclosures of the companies evolved and kept of getting detailed to meet the demands of the regulators and the investors, but there are still shortfall remains, especially in the reporting of the strategy, risks and future performance. Also, the non-financial information like corporate disclosures of environmental, social and governance aspects often disclosed in different ways and are not very easy to compare between different organizations. Integrated reporting, as proposed by the International Integrated Reporting Council (IIRC), is the direction for the future of corporate reporting by providing a holistic and longer-term view of an organization's performance.

Integrated reporting is a new concept that has been coming in different news articles and a lot of research is happening in that space. The concept of Integrating Reporting has been created to better define the metric which contributes to long-term value of the organization and makes it an essential social partner. The central theme of Integrating Reporting is that in today's world, value is increasingly shaped by factors such as reliance on the environment, social reputation, human capital skills and others. This value creation concept is the backbone of integrated reporting and, may be the direction of the future of corporate reporting.

There has been a lot of shift in the way the corporations are creating value, as more and more emphasis is given on the creation of the intangible assets. The corporations are trying to manage their intangible assets so that those can be represented as a portion of their market value. Integrating reporting helps the organization to project a correct view of the organization intangible assets. It works on the principle that the value created by the organization to some extent belongs to society and therefore should be shared between the owners and the shareholders. This is known as co-creation and this share value process can be seen as one of the fundamentals of integrated reporting. However, current approaches to financial reporting don't make it easy to assess an organization's long-term value creation prospects therefore are not deemed sufficient by investors.

The global scenario is changing at a rapid pace but the change in the reporting method is not keeping in pace with it. This is where Integrating Reporting can help organizations to provide a holistic picture of their value creation. Integrated reporting goes beyond just creating a report. It more refers to underlying thought process and can result in a written account in a report. Elements to consider according to the IIRC framework are: organizational overview and external environment; governance; business model; risks and opportunities; strategy; performance; outlook; and basis of preparation and presentation.

The framework therefore stresses the importance of the involvement of those charged with governance in preparation of the report. An explicit statement on their involvement, as requested in the framework, could contribute to the overall reliability of the report and can contribute to widespread support in the organization as well.

The following sub-themes can be of further interest for preparation of articles:

- Integrating reporting-A tool in the hands of business to take more sustainable decisions.
- Integrating model-A new approach that enhances Managerial development programmes.
- Adoption and implementation of integrating reporting(Risk and opportunities)
- Sustainability issues in integrating approach.
- Auditors role in integrating reporting –A new topic of debate

BRANCH SECRETARIES

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AHMEDABAD Prof. Ajay Soni Faculty, M.M. Gandhi Art & Commerce College, Kalol	BHUSAWAL Dr. A.M. Agrawal North Mahi Branch Bhusawal (Maharashtra)	AKOLA Dr. A.M. Raut Shri Shivajee College, Akola
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RAJKOT Dr. Sanjay Bhayani Dept. of Bus. Management, Saurashtra University, Rajkot.	UDAIPUR Dr. S.S.Bhanawat Deptt. of Accountancy M.L.Sukhadia Univ., Udaipur	JAIPUR Prof. S.S. Modi Deptt. of ABST University of Rajasthan, Jaipur
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