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IMPACT OF VARIOUS FINANCIAL CRISES ON INDIAN ECONOMY

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ABSTRACT

Any financial system has to face a crisis at some point of time inevitably as evident from the crises faced by different countries at times. Any financial crisis will downbeat the economy of the country and will influence many sectors. Its impact on the balance of payments is a point to discuss and debate upon. World economies in the past one to two decades have experienced many crises. Majority of the crises created panic in banking sector, witnessed the crash of stock markets, the busting of other financial assets, created currency crisis and sovereign debt crisis. The position of Balance of Payments of any country is very sensitive to the crises happening in one or the other country due to unavoidable foreign trade operations through exports and imports. Further various transactions undertaken through current account and capital account are prone to setbacks as a consequence of the financial crisis taking place in other countries. So, it is essential to researchers in the area of financial management to know and understand the impact of financial crisis of other countries on their own economy. Hence, the authors, through this research article made an attempt to throw some light on certain significant repercussions on the Indian Balance of Payments and its key operating areas such as imports, exports, trade deficit, capital account, current account, overall account and foreign investments after the advent of various crises that took place in the world economy.

KEYWORDS

balance of payments, capital account, current account, exports and imports, financial crisis, foreign trade.

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INTRODUCTION

The term financial crisis usually refers to a variety of circumstances in which some financial assets unexpectedly gets undervalued and indicates a situation where there is collapse of financial assets inducing foreign investors to withdraw their investments from country of trade. Financial crisis of-course is an unavoidable circumstance, which adversely impacts on the financial position of many countries. Macro-Economic conditions of many countries have witnessed financial crises during 20th and 21st centuries. Majority of the crises have created panic in functional financial areas like Banking sector, Financial Markets, Money Markets and lead to uncertainty in the sovereign debt position of the trade related countries. One of the most influenced areas, by the financial crises is the Balance of Payments (BoP) of the countries that are closely related to the country where there is a crisis. The Balance of Payments (BoP) of any country refers to the transactions in goods, services, assets of residents of that country with the rest of the counties in the world for a specific time period, generally given for a year. The payments will be for export of goods and trade services, import of good and trade services and international purchases and sale of assets like foreign exchange, stocks, bonds and availing and repayment of loans. In simple words, the Balance of Payments represents the sum of a country's demand for foreign currency and supply of claims in its own currency against foreign claims. The transactions of BoP are made through current account and capital account transactions. Current Account transactions are used for receipts and payments for exports and imports of goods and payments for services, while Capital Account transactions are used for money market and capital market transactions along with loan transactions. When there is a crisis taking place in any of the foreign country with which the country is having trade and commerce transactions, the effect will be automatically laid on the BoP position of the transacting country and India is no exemption for the effects of financial crises happening in other countries.

Even though there are many financial crises that took place from times till date, the most debated over are the Great Depression of 1930s, the OPEC Oil Price Shock of 1973, the Asian Crisis of 1997, the American crisis of 2008 and the Russian Financial crisis of 2014 which have created a havoc in the Global Financial systems and severely affected many countries' monetary and fiscal positions. Further there are many other crises like the Turkish Crisis, Argentine Crisis, Swedish Crisis, Finnish Crisis that have influenced many trade related countries including India. The authors through this research paper focused on the impact of some of the major crises along with other crises that have impacted India's Balance of Payments, Imports, Exports, Trade deficit, Capital Account, Current Account and Foreign Investments.

OBJECTIVES

The research paper aims at fulfilling the following objectives:

1. To understand the impact of financial crises on various economies in general and on Indiana Economy in particular
2. To study the impact of various crises on the Imports and Exports of the country
3. To analyze the impact of these crises on capital and current account balances of the country
4. To find and analyze the impact of financial crises of various countries on the foreign investment position of the country.

RESEARCH METHODOLOGY

This research is a descriptive research and hence no primary data is used in the observations and analysis of trends. The research paper makes use of secondary data that is available in the form of Newspaper coverage, analyses by financial experts, articles through magazines, journals and the content available in various websites along with the data available in the website of Reserve Bank of India, the Apex Bank of India. Trend Analysis is used to analyze the trends in the exports, imports, current account transactions, capital account transactions and foreign investment patterns after the happening of financial crises in the international arena.

IMPACT ON KEY COMPONENTS OF BALANCE OF PAYMENTS

Major components of India's Balance of Payments are merchandise Exports and Imports, Trade Balances, Current account balances, Capital account balances, Foreign Investments, External assistances, Commercial borrowings, Rupee debt services, NRI deposits, Monetary Movements and Reserves (increases / decreases).

As all these directly or indirectly get affected by the changes in the world economy. The present study concentrates on the changes that took place in the Merchandise exports and imports, trends in trade balance, trends in capital and current account balances and trends in Foreign Direct Investment.

TRENDS OF INDIAN MERCHANDISE EXPORTS

India's merchandise Exports were not greatly impacted throughout the financial crises in 20th and 21st century. Excluding few cases, all the time it has a positive supplement in merchandise exports from US\$16955 Million in 1989 to US\$316741 Million in 2014. From 1989-2014, there were numerous financial crises turned out in the global economy. The impact is discussed as below;

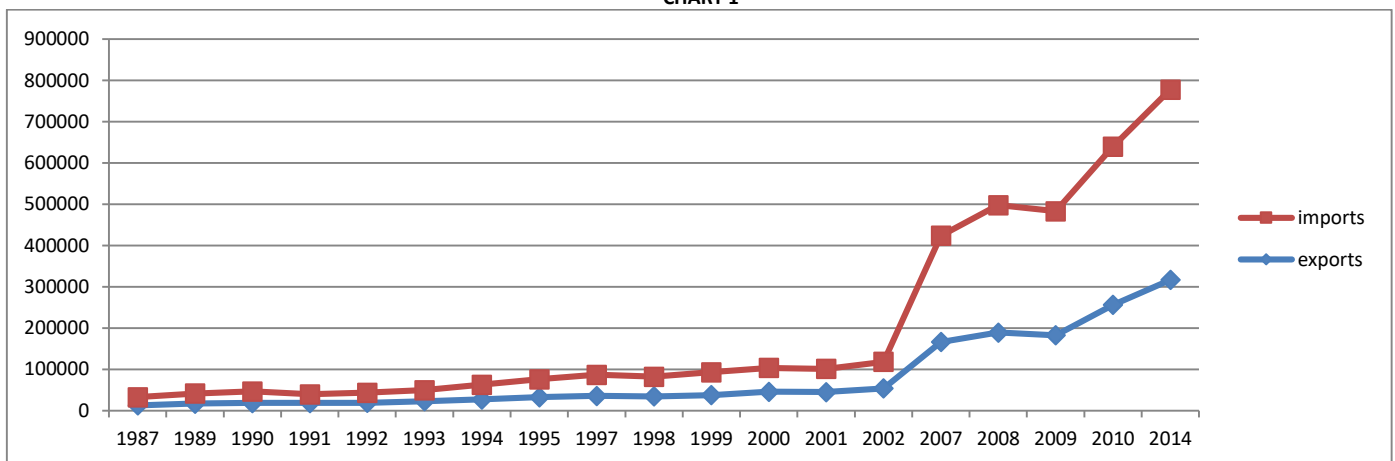
1. During 1989-91 United States Saving and Loan crisis, 1990 Japanese asset price bubble burst, 1992 Black Wednesday speculative attacks on currencies and in European Exchange Rate Mechanism also, the impact on majority of the exports is minimal. In 1990 India's total merchandise exports was US\$18477 million and in 1991 it declined (-1 percent) to US\$18266 Million. Thus, there is only minor impact on the exports.
2. During the Asian Financial crisis 1991-98 and Russian Financial crisis 1998, the growth of merchandise exports was dwindled around 4 percent from US\$35680 million to US\$34298 Million.
3. Throughout the Turkish economic crisis 2000-2001 and Argentine economic crisis during 1999-2002, the growth of merchandise exports experienced both positive and negative trends. In the year 2000 exports amounted to US \$ 37542 Million and they increased to US\$ 45452 Million in 2001, thus exports increased around 4 percent between these two years. Instantly in 2002 exports dropped down to US\$44703 Million, it plunged around (-2 percent). There was a rapid enlargement of merchandise exports from US\$53774 Million in 2002 to US\$189001million in 2014. It was around 250 percent hike recorded in the period of crisis. It may also be the impact of global crisis in 2008, that the growth of merchandise exports fallen down in 2009 from US \$ 189001 Million to US \$ 182442.
4. Again in 2010, during the European sovereign debt crisis, merchandise exports have recovered around 40 percent from US\$182442 million in 2009 to US\$ 256159 million in 2010 and in the following year 2011 also exports recorded 40 percent increase from US\$256159 million to US \$ 309774 million. It implies that the 2010 European sovereign debt crisis has not greatly impacted on India's exports in 2011. But the overall export growth rate during 2011-15 was not very progressive i.e., it is about only 3 percent of export growth from US\$309774million to US\$ 316741 million, in these four years. In the period of 2012 to 2015, exports recorded negative growth from US\$ 309774 million in 2012 to 306581 (-1 percent) in 2012, and from US\$318607 million in 2013 to US\$3 16741 million in 2014.

TRENDS OF IMPORTS

1. The imports of India have considerably increased in the 20th century from US\$ 15715 million in 1985 to US\$55383 million in 1999. The growth rate in imports was 252 percent, which is observed during the period of United States savings and loan crisis that occurred during 1989-1991. India's imports diminished from US\$24411 million in 1989 to US\$ 21064 million in 1991. The rate of decline are observed to be -15 percent. During the Asian Financial crisis 1997-98 and the devaluation and banking crisis across Asian continent, the imports of India plunge from US\$51187 million in 1997 to US\$ 47544 million in 1998 registering a negative growth rate of -7 percent.
2. During the crisis period of 1990-1995, which witnessed the Japanese Asset price bubble collapse, Swedish Banking Crisis and Finish Bank crisis in 1990, and also during the speculative attacks on currencies in the European Exchange Markets and the economic crisis in Mexico during 1994, the imports of the country moved from US\$27914 million to US\$ 35904 million registering a growth of 29 percent during this period.
3. In the beginning of 21st century, economic crisis of 2000-2001 caused a decrease in India's total volume of imports from US\$ 57912 million in 2000 to US\$ 56277 million in 2001, i.e., decreased around -3 percent.
4. During Global Financial crisis 2008, India's imports increased from US\$ 257630 million in 2007 to US\$ 308520 million in 2008 listing a growth rate of 19 percent. However, India's imports declined from US\$ 308520 million in 2008 to US\$300644 million in 2009 indicating a decline of around -3 percent. During the time of Russian Financial Crisis 2014 also, there was a minute decline in imports of around 1 percent, from US\$ 466216 million in 2013 to US\$ 460920 million in 2014.

The phases of change in the rates of exports and imports were given below in the trend line.

CHART 1



Source: RBI Website

The above trend line is drawn from the data collected through Reserve Bank of India(RBI) website. The trends drawn in the figure indicate the total imports and exports from all sectors.

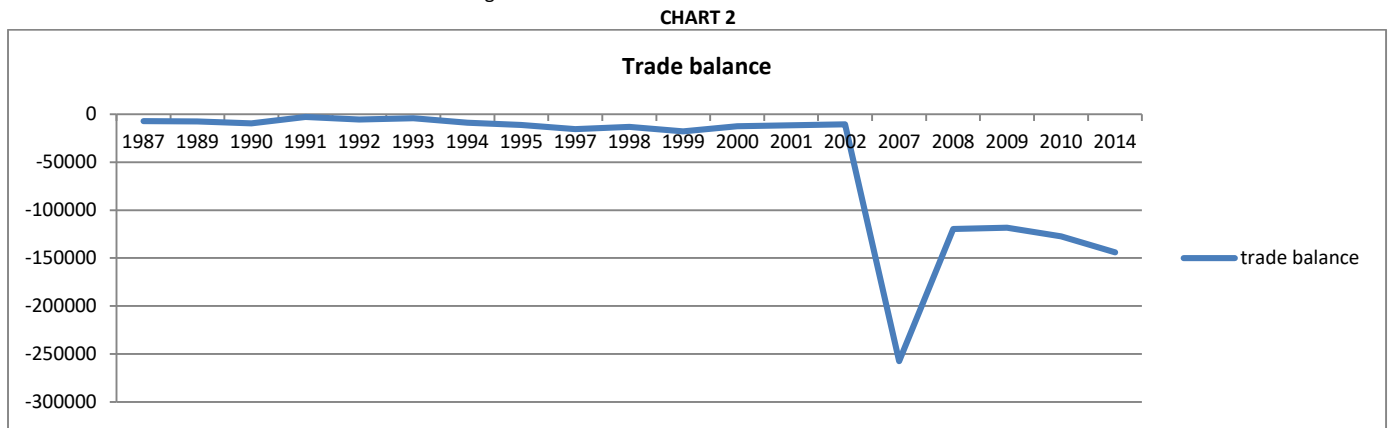
TRENDS OF TRADE BALANCE

Trade balance is the surplus or deficit between exports and imports of a country. The India's exports always have been lesser than the imports due to the developing nature of the economy. The position of trade balances is also one of the sensitive factor to be studied to understand the impact of various financial crises on the total economy.

1. From the largest one day break down of stock market in history in 1987 till the Russian financial crisis in 2014 and Chinese financial crisis of 2015; all these crises critically impacted the India's Trade balance as there is a persistent negative gap between exports and imports. India's negative trade balance moved from US\$-7168 million in 1987 to US\$-144179 million in 2014. There is drastic increase in the deficit of trade balances. Only in few cases, it registered lower trade balance deficit.

- After the United States saving and loans crisis in 1989-91 and Japanese asset price bubble collapse in 1990, there was a record lowest negative trade balance of US\$ -2798 million in 1991, since the year 1984. It was US\$ -9437 million in 1990, in 1991 trade balance deficit reduced by 70 percent compared to 1990. During 1991, the growth of both exports and imports declined. In 1992, deficit of trade balance increased to 94 percent in comparison with 1991. India's negative trade balance came down to US\$ -4056 million in 1993 from US\$ -5447 million in 1992 indicating a decrease of 34 percent.
- During the Mexico's economic crisis in 1994, the negative trade balance further rose to from US\$ -4056 million in 1993 to US\$ -9049 millions in 1994 indicating an increase of 123 percent. In this case, both exports and imports increased in comparison with 1993. During the Russian financial crisis in 1998, the trade deficit growth rate came down to 15 percent amounting to US\$ -15507 million. Also, there is a decrease in both exports and imports in comparison with that of 1997.
- During the period of Turkish economic crisis in 2000-2001, there is a negative growth of trade balance that drastically declined from US\$ -17841 million in 1999 to US\$ -12460 million in the year 2000. Even though there is decline of 30 percent of the trade balance, there was a positive impact on the exports and imports of India in comparison with the imports and exports in the year 1999.
- The economic crisis of 2001 also impacted the trade balance deficit. Trade balance moved from US\$ -12460 million in the 2000 to US\$ -11574 million in the year 2001, but during this time there was no decline in exports and imports in India. In 2002 also, trade deficit decreased from US\$ -11574 million in year 2001 to US\$ -10690 million in 2002. During this time also there was no decline of exports and imports. The Global financial crisis of 2008 influenced the trade balance deficit from US\$ -61782 million to US\$ -119519 million in 2007, and during this time there was drastic increase of exports and imports.
- Finally, in 2014 Russian financial crisis impacted deficit trade balance which moved from US\$ -147699 million in 2013 to US\$ -144179 million in 2014. At the same time exports and imports decreased when compared with the year 2013.

The trends of trade balance are reflected in the following chart.



Source: RBI Website

The above trend line clearly depicts that there is a stability more or less in the trade balances from 1987 to 2001 and there is a sharp fall in 2007 indicating the influence of Global financial crisis and there is recovery in 2009.

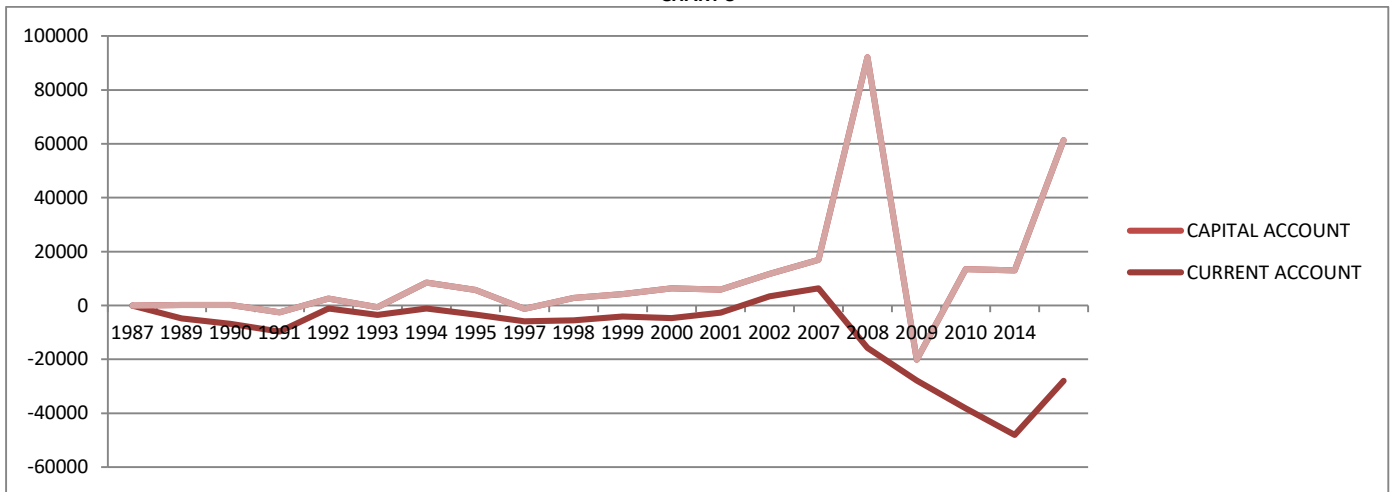
TRENDS OF CURRENT ACCOUNT AND CAPITAL ACCOUNT BALANCE

Current Account and Capital Account Balances are also the indicators the financial position of the country. Indian current account is having a negative balance from 1987 to the year 2014 continuously except for the years 2001, 2002, and 2003. The amount of balance is US\$ -6841 million in 1989 to US\$ -27937 million 2014 ignoring the three years mentioned above.

- During the period 1989 to 1991, balance of current account recorded changes like US\$ -6841 million, US\$ -9680 million and US\$ -1159 million respectively. Negative current account balance reduced almost 88% in 1991 compared to 1990, again negative current account balance increased in 1992 to US\$ -3526 million. During economic crisis of Mexico in 1994, negative current account balance increased drastically from US\$ -1159 million 1993 to US\$ -3369 million in 1994. In 1997 current account balance was US\$ -5499 million and in 1996 it was US\$ -4619 million.
- The Asian financial crisis in 1997 much impacted the current account balance which moved from US\$ -4619 million in 1996 to US\$ -5499 million in 1997. During the Russian financial crisis of 1998, current account deficit was reduced to US\$ -4038 million from US\$ -5499 million in 1997, again during the period of Argentine economic crises (1999 to 2001) and Turkish economic crisis current account balance flows are US\$ -4698, -2660 and 3400 million 1999, 2000 and 2001 respectively. After these crises current account balance recorded positively first time in 2001, continued for 2002 and 2003 with US\$ 3400, 6345 and US\$ 14083 million respectively.
- In the period of global financial crises 2008, the current account balance changed from US\$ -15738 million from US\$ -9565 million in 2006. At the end during Russian financial in 2014 deficit current account balance moved to US\$ -27937 million from US\$ -32397 million in 2013.
- Capital Account is also very sensitive to the changes taking place in the national and international economies. Capital Account balances also have noticed to change even though not abnormally throughout these crises periods. During 1989-1991 when there is crisis in the United States, the capital account balance increased from US\$ 4506 million in 1986 US\$ 4512 million in 1987, to US\$ 8064 million in 1988. During 1989-1992 the balances started to collapse like US\$ 6977 million in 1989, US\$ 7188 million in 1990, US\$ 3777 million in 1991, against US\$ 8064 million in 1988. In the years 1993 and 1994 capital account balances recouped to US\$ 9694 million, US\$ 9156 million respectively, from US\$ 2936 million in 1992.
- Again capital account balance started to slump in 1995, during the era of Mexico's economic crisis in 1994-1995, moved to US\$ 4690 million in 1995 from US\$ 9156 million in 1994. It revamped in 1996 and 1997 as US\$ 11412 million and US\$ 10010 million in the respective years. Capital account balance turned down during the period of Asian financial crisis 1997-1998, it shifted from US\$ 10010 million in 1997 to US\$ 8260 million in 1998 and touched US\$ 11100 million in 1999. A point to note here is that during normal circumstances of the economy from 2003-2006, balance of capital account recorded a rise from US\$ 17338 million to US\$ 46171 million.
- Following 2007-2008 global financial crisis, the balance of capital account diminished considerably from US\$ 7835 million in 2009, US\$ 61103 million in 2010 and US\$ 65324 million in 2011 from US\$ 10902 million in 2007. Capital account balance moved to US\$ 91989 million in 2012 and surged to US\$ 47906 million in 1993 and at the end of 2014 it pulled off to US\$ 89344 million.

The trends of capital account and current account balances are depicted in the following trend plot.

CHART 3



Source: RBI Website

The overall balance is a composite of current account balance and capital account balance. Fortunately, the balance of these two accounts together has been recorded as US\$195 million in 1987 to US\$ 61406 million in 2014. Thus even though there are financial crises happening and inspite of the sensitivity to the international economic conditions, India is able to balance the capital and current accounts without much abnormalities.

TRENDS OF FOREIGN DIRECT INVESTMENTS IN INDIA

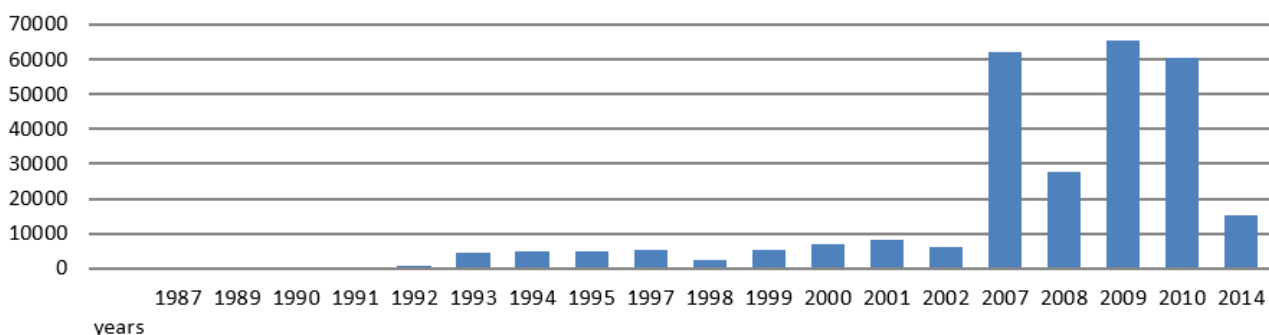
Foreign investment is indispensable to the progress of any nation and India is no exception for that. Infact, it the most sensitive to the changes taking place in the international affairs and hence reflects the impact very clearly.

1. During 1989-1991 United States Saving and Loan Crisis, Foreign Direct Investments declined from US\$410 million in 1989 to US\$ 103 million in 1990 and US\$ 133 million in 1991. After that Foreign Investment reinforced to US\$ 557 million in 1993. Mexico’s economic crisis did not greatly impact foreign investments in India, it touched to US\$ 4922 million in 1994 from US\$ 4233 in 1993.
2. However, it had adverse impact at the end of 1997-1998 during the Asian financial crisis, where the Foreign Direct Investment slugged from US\$ 5390 million in 1997 to US\$ 2412 million in1998. Throughout this period, about 55 percent of Foreign Direct Investments were withdrawn from India because of both Asian financial crisis and Russian economic emergency.
3. Foreign Direct Investments in India recovered in 1999 to US\$ 5191 million, to US\$ 6791 million in 2000, and to US\$ 8146 million in 2001 even though there is Turkish economic crisis in 2000-2001. However, at the end of Argentine economic crisis a large amount of Foreign Direct Investments in India i.e., around 31 percent of is withdrawn from country.
4. During 2007-2008, at the time of Global financial crisis and during 2008-2011, at the time of Argentine economic crises, Foreign Direct Investment was much impacted; it has decreased from US\$ 62000 million in 2007 to US\$ 27884 million in 2008. The situation got better in 2009 where it got increased to US\$ 65485 million and again declined to US\$ 60500 million in 2010, which may be owed to the European sovereign debt crisis. This trend persisted for three more years and the foreign investment came down to US\$ 35792 million in 2013. Further, the foreign investment has reached to US\$ 15348 registering a negative growth compared to the previous year.

The trends of foreign investments are plotted hereunder.

CHART 4

Foreign Direct Investment



Source: RBI Website

The above trend indicates that there are fluctuations in the Foreign Direct Investment and it has decreased further in the year 2014.

CONCLUSION

The above data indicates that the financial crises happening in the international scenario have their impact either positively or negatively on the Balance of payments, Capital and Current Accounts transactions, Imports and Exports of the country and also on the amount of Foreign Investments of the country. Among all the crises, the much impacting crisis is the Global Financial Crisis that took place during 2007-08, where there is a drastic decline in the total amount of foreign investment. Another crisis that has impacted the economy and created a wide gap between the imports and exports is the Russian Financial crisis that took place in 2014. The study indicates that any economy will be sensitive to the changes taking place in the international financial system and cannot escape the impact on one or the other areas related to the Balance of Payments. The important aspect to be mentioned here is that even though the economy is sensitive to the international scenario, it has never been critically impacted by the conditions due to the prevalence of strong financial policies and sustainable financial system of the country.

LIMITATIONS OF THE STUDY

The present study is having certain limitations; it has considered only some of the major financial crises that have been much debated over throughout the world and the impact is studied only relevant to the areas mentioned in the objectives. Also, the tables contain the data up to 2015 only, as the study is limited to the financial crises that occurred till the year 2015.

SCOPE FOR FURTHER RESEARCH

There is a lot of scope for the researchers to study the impact of the financial crises on individual sectors of the economy and also on the service sector especially. Further research can also be carried out by considering the data till date.

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AN ANALYSIS OF FINANCIAL RISK IN CAPITAL STRUCTURE

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ABSTRACT

Mix of debt and equity in capital structure impacts value of the firm. Use of debt increases the risk of the firm. This study analyses the impact of financial risk on debt – equity mix and also analyses the impact of financial risk on debt equity mix decisions of selected industries. The study covers a period of 7 years (2010-2017) drawing data from financial statements of 25 companies – five each from Chemical, Engineering, Food, Media and Entertainment sector. Analysis is carried out using regression model. From the estimated results, it is concluded that financial risk variables, particularly interest risk followed by volatility in ROE has significant effect on determining the additional variation in use of debt financing in business through long-term sources among firms under all selected sectors.

KEYWORDS

financial risk, debt-equity mix, long term debt, short term debt.

JEL CODE

G32

INTRODUCTION

An optimum mix of debt and equity in the capital structure of the firm would lead to maximize the wealth of shareholders by minimising aggregate cost of capital. Determining optimum capital structure is one of the basic criteria of policy decision making by finance managers, with respect to the components of capital. Due to the relevance of capital structure policy has gained momentum among the academicians, researchers, and financial practitioners. The choice of appropriate capital structure depends on number of factors such as nature of business, purpose of financing, period of financing, market sentiments, control aspect, attitude of the investors, and so on. A firm is said to be trading on equity when the firm has the ability to maximize the return to the shareholders by way of employing the adequate debt in the capital structure.

The formation of an appropriate capital structure is not an easy task as the presence of higher leverage in capital structure can lead to bankruptcy. The capital structure is an indicator of the risks that a company may be facing (operating risk, financial risk). For every company there is a necessity for attaining an optimal balance of debt and equity sources in its capital structure. Otherwise, it may face difficulties in raising funds favourably in the long run to finance its developmental projects. Leverage ratio affects the cost of capital. Firms can choose alternative forms of capital structure to maximize overall market value. In this scenario, here an attempt is made to evaluate the capital structure that is share of debt and equity by groups of firm with different levels of financial risk under different sectors.

REVIEW OF LITERATURE

The literature on capital structure marked the beginning when seminal work of Modigliani and Miller (1958;1963) postulating the irrelevance of capital structure in the valuation of a firm without tax effect and with tax advantage was proposed. This was followed by the trade-off theory (Miller1977), pecking order theory or asymmetric information theory (Myers, 1984) and agency theory (Haris and Raviv, 1990). Phenomenal empirical research has been conducted on the determinants of capital structure in both developed and developing countries. Prominent studies are by Rajan and Zingales (1995).

Even in the last two decades the studies continue to focus on capital structure. Keshar J. Baral (2004) studied determinants of capital structure: and found that size, growth rate and earning rate are statistically significance influence on capital structure decisions.

Kinga Mazur (2007) focused on determinants of Capital Structure Choice and tried to examine the fact whether the financing decision of polish firms are influenced by pecking order theory or Trade off Theory. It was observed that pecking order hypothesis best explains the financing choice of polish firms. In a similar study Nadeem et.al (2011) tried to investigate the factors determining the capital structure and concluded that profitability, tangibility, earning volatility, liquidity are negatively related to leverage while firm size is positively related to leverage. Jothi (2012) focused on economic analysis of financial risk of debt-equity mix, among firms with low, medium and high financial risk using three regression models. It was found that financial risk variables, particularly interest risk followed by volatility in ROE has significant effect on determining the additional variation in use of debt financing in business through long-term sources among firms under all selected sectors.

Ashok (2012), studied the existing capital structure maintained by SAIL to find the relation between capital structure and value of firm. They found that decisions taken by the management was very fast and hasty. Financial acumen was very poor. The management could not foresee the risk that might arise in future. Alayemi et.al (2013) found that the choice of leverage must be seriously considered by management as the capital strength is crucial to profitability of a company. Prerna et.al (2014) tried to examine the debt equity mix of the three media companies to check the solvency position of these companies. Financial leverage stated as a double edged sword describes the limit of financial risk of the companies.

Narayan et al, analyzed capital structure decisions of Infrastructure Companies in India with the help of leverage and profitability ratios. They found that the sources of funds for these segments broadly comprise 30% to 40% of Debt and rest of equity shares.

IMPORTANCE OF THE STUDY

Considering the fact that debt is an inevitable component in capital structure which can accelerate value of the firm through leverage, debt-equity mix has been the focus of academicians, researchers and practitioners. Many studies have focused on different dimensions of capital structure. Present study focuses on financial risk of using debt in the capital structure considering both long and short term debt. The study finding would help in understanding the financial risk and its determinants.

STATEMENT OF THE PROBLEM

In this study, an attempt is made to identify the impact of financial risk on debt financing in capital structure through long-term debt by firms under Chemical, Engineering, Food, Media and Entertainment sector across in India. For analysing the impact, multiple regression statistical technique was used. Three measures were used as proxy for capital structure. Three measures are long-term debt (LTDTA), short-term debt (STDTA) and total debt (TDTA) relative to total assets.

OBJECTIVES

The objective of the study is to analyse the impact of financial risk on debt – equity mix and also to analyse the impact of financial risk on debt equity mix decisions of selected industries.

RESEARCH METHODOLOGY

The study covers a period of 7 years (2010-2017) drawing data from financial statements of 25 companies – five each from Chemical, Engineering, Food, Media and Entertainment sector. The statistical tools used for analysing them varies from general descriptive analysis such as Mean, Standard Deviation, Coefficient of Variation and Compound Growth Rate to Linear Growth Rate. Also, Parametric t-test for ascertaining the level of significance and one-way analysis of variance, simply called F-test for comparing.

Significance of the difference in debt level across groups is tested with one ANOVA (F test). Financial leverage; interest rate risk and coefficient of variation in return on equity were used as measures of financial risk. Financial leverage (FL) and coefficient of variation in return on equity (CVROE) reflects the financial risk of a firm in the preceding years (FL is percent change in EPS relative to percent change in EBIT and CVROE is calculated as standard deviation divided by mean based on three years data). So, any decision selection of capital between debt and equity would obviously be based on these measures.

REDUCED MODEL 1

$$Y = \alpha + \beta_1 \text{Prof} + \beta_2 \text{size} + \beta_3 \text{Tang} + \beta_4 \text{NDTS} + \beta_5 \text{Growopp} + \beta_6 \text{Agcost} + \beta_7 \text{Incvar} + \epsilon \tag{1}$$

Y = Dependent Debt variables (Long-Term Debt to Total Assets, Short-Term Debt to Total Assets, Total Debt to Total Assets)

Prof = Profitability (measured as natural logarithm of profit before tax scaled by net sales)

Size = Size of the firm (measured as Natural logarithm of Total assets)

Tang = Tangibility (ratio of fixed assets to total assets)

NDTS = Non-debt tax shield (depreciation to total assets)

GrowOpp = Growth opportunity (ratio of market value of assets to book value of assets)

AgCost = Agency Cost (asset turnover ratio, measured as net sales to total assets, is used as proxy for agency cost)

IncVar = Income variability (an indicator of operating risk, measured as standard deviation of EBIT – Earning before interest and tax)

ε = Error term

REDUCED MODEL 2

$$Y = \alpha + \beta_1 \text{MFR} + \beta_2 \text{HFR} + \beta_3 \text{FINLVR} + \beta_4 \text{IR} + \beta_5 \text{CVROE} + \beta_6 \text{MFR} * \text{FINLVR} + \beta_7 \text{MFR} * \text{IR} + \beta_8 \text{MFR} * \text{CVROE} + \beta_9 \text{HFR} * \text{FINLVR} + \beta_{10} \text{HFR} * \text{IR} + \beta_{11} \text{HFR} * \text{IR} + \beta_{12} \text{HFR} * \text{CVROE} + \epsilon \tag{2}$$

Y = As above

MFR = Dummy variable for Medium Financial Risk (1 for Medium Risk and 0 for others)

HFR = Dummy variable for High Financial Risk (1 for High Risk and 0 for others)

FINLVR = Percentage change in EPS / percentage change in EBIT

IR = Interest risk – [EBIT / (EBIT – I)]

CVROE = Coefficient of Variation in Return on Equity

MFR x FINLVR = Interaction between M F R a n d FINLVR

MFR x IR = Interaction between MFR and IR

MFR x CVROE = = Interaction between M F R a n d CVROE

HFR x FINLVR = Interaction between H F R and FINLVR

HFR x IR = Interaction between HFR and IR

HFR x CVROE = Interaction between HFR and CVROE

ε = Error term.

FULL MODEL

$$Y = \alpha + \beta_1 \text{Prof} + \beta_2 \text{size} + \beta_3 \text{Tang} + \beta_4 \text{NDTS} + \beta_5 \text{Growopp} + \beta_6 \text{Agcost} + \beta_7 \text{Incvar} + \beta_1 \text{MFR} + \beta_2 \text{HFR} + \beta_3 \text{FINLVR} + \beta_4 \text{IR} + \beta_5 \text{CVROE} + \beta_6 \text{MFR} * \text{FINLVR} + \beta_7 \text{MFR} * \text{IR} + \beta_8 \text{MFR} * \text{CVROE} + \beta_9 \text{HFR} * \text{FINLVR} + \beta_{10} \text{HFR} * \text{IR} + \beta_{11} \text{HFR} * \text{IR} + \beta_{12} \text{HFR} * \text{CVROE} + \epsilon \tag{3}$$

RESULTS & DISCUSSION

To begin with, selected companies under each sector are segmented into three mutually exclusive groups based on low, moderate and high financial leverage. Companies were segmented according to the ratings given by the Standard and Poor’s Rating services.

TABLE 1: BASIS OF CLASSIFICATION

	FFO/Debt	Debt/EBITDA	Debt/Capital
Low financial risk	Above 45	Below 2	Below 35
Medium financial risk	20-45	02-04	35-50
High financial risk	Below 20	Above 4	Above 50

Secondly all the variables were computed considering all dependant and independent variables and then the results of the regression analysis of restricted models and full model are presented below. By using reduced model 1, in which the effect of financial risk is set to zero, the regression coefficients of the control variables on LTD, STD and TD were estimated. Using reduced model 2, the regression of debt financing relative to total assets on financial risk variables after setting effect of control variables to zero was estimated. By using full model, the effect of financial risk variables on debt financing in the presence of control variables were examined.

TABLE 2: EFFECT OF FINANCIAL RISK ON LTDTA- CHEMICAL

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	B	t	sig
Size	-.553	-1.416	.167				-.476	-1.328	.198
Incomevariability	-.554	-1.492	.146				-.376	-.992	.333
Growthopp	-.090	-.480	.635				.131	.667	.512
Agencycost	.197	1.290	.206				.332	2.154	.043
NondebtTaxShield	.042	.274	.786				-.090	-.626	.538
Profitability	-.150	-.729	.471				-.084	-.492	.628
Tangibility	.578	3.795	.001				.648	4.102	.001
FL				.160	.604	.551	.235	1.348	.192
IR				-.211	-.686	.498	-.368	-1.422	.170
CVROE				-1.683	-.595	.557	-1.806	-.785	.441
MFR				.309	.849	.403	.258	1.064	.299
HFR				-.193	-.509	.615	.274	1.052	.305
MFRFINLIV				-.468	-1.863	.073	-.310	-1.868	.076
MFRIR				.051	.162	.873	.369	1.387	.180
MFRCVROE				.061	.164	.871	.145	.601	.554
HFRFINLIV				-.078	-.380	.707	-.095	-.655	.520
HFRIR				.325	.964	.343	.208	1.004	.327
HFRCVROE				1.540	.536	.596	1.578	.674	.508
R Square	.546			.334			.820		
Adjusted R Square	.447			.072			.666		
F	5.503			1.275			5.324		

Table 2 reports the results of three regression models for long term debt on total assets under chemical sector. It can be observed that R square is 0.546 i.e. 54.6% of the dependent variable (LTDTA) is explained by Independent variables (profitability, size of the business, tangibility, non-debt tax shields, growth opportunity, agency cost, income variability) in model-1 and in model-2 it is 0.334, in full model 0.82. It can be observed that in Model-1 only tangibility ($p < 0.05$) i.e., 0.001 and $t = 3.795$ is significant factors of LTDTA and in model 2 none of the factors are significant. In full model agency cost and tangibility are significant. MFR is positively correlated in the absence of control variables but it is not significant ($\beta = .309$ & $sig = 0.403$).

TABLE 3: EFFECT OF FINANCIAL RISK ON STDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	B	t	sig
Size	.598	1.688	.101				.029	.172	.865
Income variability	.525	1.559	.129				-.239	-.962	.347
Growth Opp	-.098	-.580	.566				-1.132	-.512	.614
Agency cost	-.375	-2.705	.011				.134	.577	.570
Non debt Tax Shield	-.006	-.046	.964				.225	.899	.379
Profitability	-.082	-.440	.663				.078	.493	.627
Tangibility	-.489	-3.544	.001				-.009	-.035	.973
FL				.004	.016	.987	-.032	-.137	.893
IR				-.099	-.349	.730	-.117	-.838	.411
CVROE				1.389	.531	.600	-.156	-.788	.439
MFR				.263	.782	.441	1.554	.692	.497
HFR				.740	2.109	.044	.181	.526	.604
MFRFINLIV				.255	1.100	.281	-.063	-.173	.865
MFRIR				.096	.328	.745	.091	.486	.632
MFRCVROE				-.100	-.290	.774	-.287	-1.935	.067
HFRFINLIV				-.019	-.098	.922	-.160	-1.152	.262
HFRIR				-.234	-.751	.459	-.086	-.521	.608
HFRCVROE				-1.116	-.420	.677	-.304	-2.006	.058
R Square	.626			.430			.834		
Adjusted R Square	.545			.207			.693		
F	7.661			1.923			5.882		

Table 3 shows R^2 value of 0.626 (Model-1) 0.43 (Model-2) and 0.834 (Full-model) indicating that dependent variable (STDTA) is explained by Independent variables. It has been decreased in the absence of control variables. It can also be observed that in Model-1 only tangibility ($p < 0.05$) i.e., 0.001 and $t = 3.795$, $sig = -.489$ and agency cost ($p = 0.11$ and $t = -2.07$ and $sig = -.375$) is significant factors of STDTA. As these are negatively correlated it refers these two factors do not have any effect on STDTA and in model-2 high financial risk is significant. Portion of short term fund for firms under chemical sector, is significantly higher for high risk firms compared to low and medium risk firms.

TABLE 4: EFFECT OF FINANCIAL RISK ON TDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	T	sig	β	T	sig	B	t	sig
Size	-.138	-.262	.795				.331	1.522	.143
Income variability	-.210	-.419	.678				-.708	-2.183	.041
Growth opp	-.211	-.838	.408				-3.428	-1.190	.247
Agency cost	-.107	-.519	.607				.464	1.528	.141
Non debt Tax Shield	.048	.232	.818				.572	1.754	.094
Profitability	-.274	-.986	.332				-.325	-1.567	.132
Tangibility	.275	1.340	.190				.469	1.409	.174
FL				.211	.986	.333	.157	.520	.609
IR				-.369	-1.485	.149	-.236	-1.298	.209
CVROE				-.835	-3.366	.717	.118	.455	.654
MFR				.653	2.226	.034	3.541	1.209	.240
HFR				.464	1.516	.141	-.442	-.985	.336
MFRFINLIV				-.359	-1.771	.088	-.548	-1.154	.262
MFRIR				.160	.622	.539	.257	1.049	.306
MFRCVROE				-.018	-.059	.954	.153	.795	.436
HFRFINLIV				-.119	-.719	.478	-.271	-1.501	.148
HFRIR				.195	.716	.480	-.192	-.895	.381
HFRCVROE				.915	.395	.696	.545	2.758	.012
R Square	.175			.566			.719		
Adjusted R Square	-.050			.395			.477		
F	9.700			3.318			2.980		

For total debt, it is clear that, all control variables have explanatory power and together explaining 17.5, 56.6% and 71.9% of the variation in total debt. In model-1 None of the factors are significant factors of TDTA and of the model-2 MFR is significant as positive total debt influences more on medium risk firms. In the full model Income variability and HFR*CVROE are significant and has positive coefficient for total debt. This evidences that, increase in volatility in ROE decrease the debt fund for firms with low financial risk.

TABLE 5: EFFECT OF FINANCIAL RISK ON LTDTA - ENGINEERING

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	B	t	sig
Tangibility	-.114	-.842	.406				.127	.635	.532
Non debt tax shield	-.224	-2.178	.037				-.010	-.061	.952
Agency cost	.538	3.835	.001				.568	3.058	.006
Growth opp	.350	3.438	.002				.359	3.287	.004
Income variability	-.220	-1.118	.272				-.350	-.972	.342
Prof	-.402	-1.938	.062				-.007	-.021	.984
Size	.590	4.236	.000				-.176	-.433	.669
FL				.326	.204	.840	.511	.393	.699
IR				.767	1.856	.074	.634	1.716	.101
CVROE				1.653	1.043	.306	.135	.105	.917
MFR				-.954	-.824	.417	-1.754	-2.046	.054
HFR				.318	1.165	.254	.140	.679	.505
MFRFINLIV				-.302	-.188	.852	-.474	-.365	.719
MFRIR				-.068	-.186	.854	.074	.197	.845
MFRCVROE				-1.691	-1.076	.291	-.266	-.211	.835
HFRFINLIV				1.184	1.232	.228	1.237	1.783	.089
HFRIR				-.130	-.252	.803	.850	1.780	.090
HFRCVROE				.113	.436	.666	-.291	-1.465	.158
R Square	.755			.605			.873		
Adjusted R Square	.701			.450			.730		
F	14.069			3.900			7.992		

Table 5 presents LTD to total assets for firms under engineering sector are presented. Control variables is significantly fitted with 75.5%, 60.5% and 87.3% of the explained variance.

It can also be observed that in Model-1 Non debt tax shield, growth opportunity, agency cost and size are significant factors of LTDTA but Non debt tax shield is negatively correlated. In model-2 none of the factors are significant. In full model agency cost and Growth opportunity are significant and MFR is also significant and positive hence long term funds in capital structure for firms under food sector is significant to medium risk firms.

TABLE 6: EFFECT OF FINANCIAL RISK ON STDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	T	sig	β	T	sig	B	t	sig
Tangibility	-.008	-.032	.975	.269	.527	.604	.269	.527	.604
Non debt tax shield	.143	.721	.476	.336	.809	.427	.336	.809	.427
Agency cost	-.073	-.271	.788	-.108	-.227	.822	-.108	-.227	.822
Growth opp	-.201	-1.024	.313	-.138	-.496	.625	-.138	-.496	.625
Income variability	.033	.088	.931	.189	.205	.840	.189	.205	.840
Prof	-.027	-.067	.947	.421	.520	.608	.421	.520	.608
Size	-.102	-.382	.705	-.470	-.454	.654	-.470	-.454	.654
FL				-1.851	-.754	.457	-3.586	-1.079	.293
IR				-.601	-.949	.351	-.508	-.539	.595
CVROE				.321	.132	.896	2.341	.713	.484
MFR				-.315	-.178	.860	-.565	-.258	.799
HFR				-.300	-.717	.480	-.408	-.777	.446
MFRFINLIV				1.840	.747	.462	3.561	1.072	.296
MFRIR				.365	.649	.522	.753	.792	.437
MFRCVROE				-.204	-.085	.933	-2.142	-.663	.514
HFRFINLIV				.064	.044	.966	.344	.194	.848
HFRIR				.302	.382	.705	.498	.408	.687
HFRCVROE				.011	.029	.977	.117	.231	.819
R Square	.093			.074			.169		
Adjusted R Square	-1.050			-2.900			.553		
F	4.700			0.203			0.238		

Table-6 presents, R square is 9.3%, 7.4% and 16.9% indicating low predictability, dependent variable (STDTA) by Independent variables. It can also be observed that in model-1 model-2 and in the full model None of the factors are significant.

TABLE 7: EFFECT OF FINANCIAL RISK ON TDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	Sig	B	T	sig	B	t	sig
Tangibility	-.180	-1.332	.192				.165	1.034	.313
Non debt tax shield	-.222	-2.149	.039				.101	.780	.444
Agency cost	.610	4.340	.000				.616	4.154	.000
Growth opp	.233	2.285	.029				.261	2.996	.007
Income variability	.037	.189	.851				-.006	-.020	.985
Prof	-.456	-2.191	.036				.165	.651	.522
Size	.839	6.004	.000				-.242	-.749	.462
FL				.323	.236	.815	-.463	-.446	.660
IR				.719	2.037	.051	.702	2.383	.027
CVROE				1.058	.781	.441	.855	.834	.414
MFR				-.727	-.735	.469	-1.441	-2.106	.047
HFR				.222	.951	.350	-.008	-.050	.960
MFRFINLIV				-.229	-.167	.869	.571	.551	.588
MFRIR				.131	.417	.680	.310	1.043	.309
MFRCVROE				-1.074	-.800	.430	-.911	-.903	.377
HFRFINLIV				.918	1.118	.273	.911	1.646	.115
HFRIR				-.148	-.335	.740	.797	2.092	.049
HFRCVROE				.168	.758	.455	-.183	-1.155	.261
R Square	.793			.712			.919		
Adjusted R Square	.699			.599			.849		
F	13.961			6.291			13.227		

Table-7 presents R square is 79.3%, 71.2% and 91.9% indicating higher predictability of the dependent variable (TDTA) by Independent variables. In model-1 Non debt tax shield, growth opportunity, agency cost, profitability and size are significant factors and model-2, IR is significant. In full model Growth opportunity and agency cost, IR, MFR and MFRIR are significant. The significant coefficients of IR and its cross terms with medium and low financial risk has evidenced that, debt fund has increased for low financial risk firms and there has been significant difference in slope coefficients of interest risk on total debt across firms with different level of financial risk.

TABLE 8: EFFECT OF FINANCIAL RISK ON LTDTA-FOOD SECTOR

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	sig
Tangibility	-.141	-.627	.535				-.290	-1.364	.187
Nondebttaxshield	-.537	-1.874	.070				-.299	-.979	.339
Agencycost	.619	3.462	.002				.312	1.439	.165
Growthopp	-.129	-1.079	.289				-.353	-3.007	.007
Incomevariabilty	-.411	-2.372	.024				-.462	-2.840	.010
Prof	-1.499	-4.985	.000				-.615	-1.413	.172
Size	.496	2.127	.041				-.369	-.942	.357
FL				.308	.396	.695	.272	.450	.657
IR				-.255	-.371	.713	-.701	-1.263	.221
CVROE				1.654	2.263	.032	.326	.477	.638
MFR				1.146	4.340	.000	.208	.786	.441
HFR				.776	3.026	.005	.413	1.918	.069
MFRFINLIV				-.237	-.743	.464	-.221	-.950	.353
MFRIR				.004	.008	.994	.605	1.475	.155
MFRCVROE				-.431	-.885	.383	-.113	-.345	.734
HFRFINLIV				-.573	-.681	.501	-.102	-.153	.880
HFRIR				.368	.551	.586	1.125	2.205	.039
HFRCVROE				-1.612	-2.207	.036	-.429	-.632	.534
R Square	.742			.706			.905		
Adjusted R Square	.699			.599			.549		
F	13.961			6.291			13.227		

Table-8 shows test results with respect to effect of financial risk of long term debt financing in capital structure. R² is 74.2%, 70.6% and 90.5% indicating explanatory power of independent variables on dependent variable (LTDTA).

In model-1 Non debt tax shield, Income variability, profitability and size are significant factors of LTDTA and in model-2 CVROE, MFR, HFR and HFR *CVROE are significant and is positively correlated. In full model income variability and Growth opportunity are significant but it is negatively correlated and in case of financial risk variables HFRIR is significant and positively correlated($\beta=1.125$ and sig =.039) The significant coefficients of IR and its cross terms with medium and high financial risk has evidenced that, debt fund has increased for low financial risk firms and there has been significant difference in slope coefficients of interest risk on total debt across firms with different level of financial risk.

TABLE 9: EFFECT OF FINANCIAL RISK ON STDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	B	t	sig
Tangibility	.548	1.436	.161				.583	1.027	.316
Nondebttaxshield	-.464	-.953	.348				-.490	-.600	.555
Agencycost	.667	2.196	.035				.656	1.133	.270
Growthopp	.328	1.614	.116				.201	.642	.528
Incomevariabilty	-.176	-.598	.554				-.222	-.511	.615
Prof	-.477	-.934	.357				-.304	-.262	.796
Size	.500	1.262	.216				.317	.303	.765
FL				-.140	-.104	.918	-.659	-.408	.687
IR				-.198	-.166	.869	.004	.002	.998
CVROE				-.212	-.167	.868	.756	.414	.683
MFR				-.398	-.872	.391	-.152	-.216	.831
HFR				.067	.150	.882	.306	.533	.599
MFRFINLIV				-.281	-.507	.616	-.130	-.210	.836
MFRIR				-.117	-.120	.905	-.424	-.387	.703
MFRCVROE				.342	.407	.687	.213	.244	.810
HFRFINLIV				.441	.303	.764	.888	.498	.624
HFRIR				.449	.387	.702	.194	.142	.888
HFRCVROE				.188	.149	.883	-.723	-.400	.694
R Square	.254			.119			.327		
Adjusted R Square	.091			.227			.250		
F	1.555			0.343			0.566		

Results with respect to Short Term Debt financing in capital structure relative to total assets for firms under food sector are significantly fitted with 25.4%, 11.9% and 32.7%. It can also be observed that in Reduced Model 1 only agency cost influences on short term funds.

TABLE 10: EFFECT OF FINANCIAL RISK ON TDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	T	sig
Tangibility	.332	1.713	.096				.283	1.250	.225
Nondebttaxshield	-.878	-3.547	.001				-.748	-2.297	.032
Agencycost	.690	4.471	.000				.476	2.061	.052
Growthopp	.169	1.639	.111				-.052	-.415	.682
Incomevariabilty	-.349	-2.332	.026				-.345	-1.991	.060
Prof	-1.702	-6.556	.000				-.961	-2.076	.050
Size	1.014	5.038	.000				.352	.843	.409
FL				-.273	-.450	.656	.017	.026	.979
IR				.659	1.227	.230	-.233	-.394	.697
CVROE				1.362	2.385	.024	.892	1.226	.234
MFR				.848	4.111	.000	.186	.662	.515
HFR				.689	3.441	.002	.408	1.780	.090
MFRFINLIV				-.153	-.611	.546	-.197	-.795	.435
MFRIR				-.604	-1.378	.179	-.014	-.032	.975
MFRCVROE				-.105	-.277	.784	.016	.045	.964
HFRFINLIV				.479	.730	.471	.225	.317	.754
HFRIR				-.333	-.637	.529	.561	1.034	.313
HFRCVROE				-1.325	-2.324	.028	-.927	-1.283	.213
R Square	.808			.821			.893		
Adjusted R Square	.765			.750			.801		
F	19.180			11.655			9.726		

In the table it can be observed that in the reduced model except growth opportunity and non-debt tax shield others are significant. TDTA is explained by Independent variables, reflected in higher R values. In model-2 both the MFR and HFR are significant to TDTA. Non debt tax shield, Growthopp, Income variability and profitability are significant factors. But the NDTs and profitability are negatively correlated ($\beta = -.878$ and $\beta = -1.702$) respectively. In model-2 MFR, HFR and CVROE are significant and are positively correlated. This shows that increase in volatility of net income relative to equity increases the portion of long-term debt in capital structure of firms with low and high financial risk.

TABLE 11: EFFECT OF FINANCIAL RISK ON STDTA- MEDIA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	sig
Tangibility	.132	.835	.410				-.081	-.745	.465
Nondebttaxshield	.531	4.157	.000				.411	4.239	.000
Agencycost	-.343	-2.347	.025				.352	2.339	.029
Growthopp	-.098	-.414	.682				-.040	-.247	.807
Incomevariabilty	.400	1.600	.119				.332	1.832	.081
Prof	.147	.717	.478				-.431	-2.091	.049
Size	-.112	-.504	.618				-.303	-2.054	.053
FL				-.018	-.147	.884	-.036	-.540	.595
IR				.264	1.473	.152	-.055	-.509	.616
CVROE				.118	.200	.843	.878	2.528	.020
MFR				-.087	-.309	.760	-1.016	-3.230	.004
HFR				-.036	-.132	.896	-.471	-2.257	.035
MFRFINLIV				-.102	-.663	.513	-.219	-2.509	.020
MFRIR				.473	2.059	.049	.554	3.833	.001
MFRCVROE				-.018	-.072	.943	-.193	-1.106	.281
HFRFINLIV				.096	.545	.590	.074	.684	.501
HFRIR				.436	1.223	.231	1.169	3.885	.001
HFRCVROE				-.042	-.072	.943	-1.053	-3.062	.006
R Square	.608			.595			.924		
Adjusted R Square	.522			.435			.085		
F	7.084			3.735			14.084		

STDTA is explained by independent variables with higher R² Value. In model-1, agency cost and non debt tax shield are significant to STDTA. In model-2, only MFRIR is significant to STDTA. This shows that short-term debt is significantly lower for medium and high financial risk firms when compared to that of high risk firms, In full model, debt tax shield, income variability, profitability, size, CVROE, MFR (dummy), HFR (dummy), MFRFV are significant but negatively correlated. MFRIR, HFRIR and HFRCVROE are significant to STDTA and positively correlated.

TABLE 12: EFFECT OF FINANCIAL RISK ON LTDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	B	t	sig
Tangibility	.022	.168	.868				.037	.266	.793
Nondebttaxshield	.075	.716	.479				.212	1.697	.105
Agencycost	-.112	-.938	.355				-.390	-2.007	.058
Growthopp	-.236	-1.231	.227				-.293	-1.390	.179
Incomevariabilty	-.618	-3.030	.005				-.684	-2.928	.008
Prof	-1.328	-7.942	.000				-1.171	-4.409	.000
Size	.298	1.643	.110				.250	1.315	.203
FL				.138	1.019	.317	.092	1.082	.292
IR				.090	.457	.651	.024	.171	.866
CVROE				-.003	-.004	.997	-.120	-2.69	.791
MFR				1.101	3.563	.001	.323	.797	.434
HFR				.984	3.316	.003	.680	2.529	.020
MFRFINLIV				-.197	-1.168	.253	.032	.282	.781
MFRIR				-.658	-2.604	.015	-.458	-2.463	.023
MFRCVROE				-.490	-1.741	.093	-.288	-1.284	.213
HFRFINLIV				.330	1.696	.101	.042	.298	.768
HFRIR				-1.298	-3.309	.003	-.406	-1.048	.307
HFRCVROE				.347	.537	.596	.138	.311	.759
R Square	.739			.510			.873		
Adjusted R Square	.682			.170			764.000		
F	12.953			2.468			8.018		

In the above table 4.2, income variability and profitability are significant factors of LTDTA in the reduced model 1. In the reduced model 2 MFR (dummy) and HFR both are significant to LTDTA and MFR. In the full model growth opportunity, income variability and profitability and MFR*IR is also significant it means that the short term debt has increased with increase in interest risk. It can be observed here that the variation with the R² has been decreased in reduced model 2 i.e, 51% with the absence of control variables.

TABLE 13: EFFECT OF FINANCIAL RISK ON TDTA

	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	sig
Tangibility	-.026	-.182	.856				-.186	-.980	.338
Nondebttaxshield	-.083	-.707	.485				.079	.465	.647
Agencycost	.574	4.288	.000				.785	2.991	.007
Growthopp	.234	1.085	.286				.374	1.314	.203
Incomevariabilty	.327	1.427	.163				.238	.754	.459
Prof	-.255	-1.356	.184				-.560	-1.560	.134
Size	-.091	-.445	.659				-.069	-.267	.792
FL				-.121	-.964	.343	-.075	-.654	.520
IR				-.161	-.880	.387	-.245	-1.297	.209
CVROE				.882	1.470	.153	1.180	1.952	.064
MFR				.888	3.101	.004	-.442	-.806	.429
HFR				.818	2.977	.006	.073	.202	.842
MFRFINLIV				.243	1.553	.132	.079	.518	.610
MFRIR				-.362	-1.549	.133	-.109	-.435	.668
MFRCVROE				-.428	-1.640	.112	-.424	-1.397	.177
HFRFINLIV				-.096	-.532	.599	-.279	-1.479	.154
HFRIR				-.194	-.535	.597	.935	1.785	.089
HFRCVROE				-.837	-1.397	.173	-1.448	-2.417	.025
R Square	.671			.580			.768		
Adjusted R Square	.599			.414			.569		
F	9.335			3.509			3.833		

In table-13 it can be observed that the dependent variable is explained with higher R value in all three models. In model-1, income variability and profit is significant but it is negatively correlated. TDTA is explained by Independent variables (profitability, size of the business, tangibility, non-debt tax shields, agency cost, income variability). In model 2 both the MFR and HFR are significant to TDTA In the full model HFR *CVROE and agency cost are significant but it is negatively correlated.

TABLE 14: EFFECT OF FINANCIAL RISK- LTDTA – HOSPITALS

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	sig
Tangibility	1.596	4.655	.000				1.620	3.124	.005
Nondebttaxshield	.571	1.144	.261				.396	.554	.586
Agencycost	-2.388	-3.223	.003				-2.066	-1.897	.072
Growthopp	-.088	-.914	.367				-.108	-.656	.519
Incomevariabilty	.699	3.979	.000				.742	2.364	.028
Prof	.705	3.726	.001				.729	3.174	.005
Size	-1.098	-3.576	.001				-.866	-1.150	.263
FL				4.131	1.783	.085	.569	.409	.687
IR				-.193	-.734	.469	-.254	-1.097	.285
CVROE				.686	2.235	.034	-.004	-.023	.982
MFR				-.205	-.633	.532	-.271	-1.030	.315
HFR				-.623	-1.972	.059	-.540	-2.784	.011
MFRFINLIV				-3.110	-1.673	.106	-.407	-.367	.717
MFRIR				.096	.412	.683	.332	1.653	.113
MFRCVROE				.178	.873	.390	.127	.876	.391
HFRFINLIV				-2.185	-1.632	.114	-.290	-.365	.718
HFRIR				.056	.234	.817	.099	.303	.765
HFRCVROE				-.314	-1.067	.295	-.083	-.430	.672
R Square	.820			.464			.882		
Adjusted R Square	.780			.253			.781		
F	20.807			2.202			8.728		

In model-1 tangibility, income variability, profitability and size are significant with positively correlated. In the reduced model 2 CVROE is significant and is positively correlated. In full model HFR is significant. Long term debt influences on high risk firms.

TABLE 15: EFFECT OF FINANCIAL RISK- STDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	Sig
Tangibility	1.315	3.013	.005				2.070	3.364	.003
Nondebttaxshield	.053	.084	.934				.587	.691	.497
Agencycost	-2.348	-2.487	.018				-3.131	-2.422	.025
Growthopp	-.068	-.553	.584				.056	.287	.777
Incomevariabilty	.390	1.744	.091				.390	1.047	.307
Prof	.388	1.608	.118				.752	2.760	.012
Size	-1.521	-3.887	.000				-1.286	-1.439	.165
FL				.838	.359	.722	-2.617	-1.584	.128
IR				-.054	-.205	.839	.113	.412	.685
CVROE				.128	.414	.682	-.538	-2.386	.027
MFR				.347	1.061	.298	.365	1.170	.255
HFR				-.289	-.908	.372	-.303	-1.317	.202
MFRFINLIV				-.714	-.381	.706	1.909	1.453	.161
MFRIR				.032	.138	.892	.434	1.819	.083
MFRCVROE				.153	.748	.461	.215	1.248	.226
HFRFINLIV				-.372	-.276	.785	1.437	1.525	.142
HFRIR				-.248	-1.030	.312	.033	.084	.934
HFRCVROE				.202	.680	.502	.510	2.233	.037
R Square	.708			.455			.834		
Adjusted R Square	.644			.241			.692		
F	11.067			2.123			5.861		

In all three models R² is high indicating the explanatory power of independent variables. In model-1 only tangibility is significant and is positively correlated ($\beta=1.315$ and $\text{sig}=.005$). In the model-2 none of the factors are significant. In model-1 size, tangibility and NDTs are significant. In the full model only HFRCVROE is significant and is negatively correlated.

TABLE 16: EFFECT OF FINANCIAL RISK TDTA

Exploratory variables	Reduced model 1			Reduced model 2			Full Model		
	β	t	sig	β	T	sig	β	t	sig
Tangibility	-.763	-2.306	.028				-.776	-1.643	.115
Nondebttaxshield	-1.034	-2.144	.040				-.746	-1.145	.265
Agencycost	1.663	2.324	.027				1.596	1.609	.123
Growthopp	.248	2.666	.012				.339	2.270	.034
Incomevariabilty	-.814	-4.800	.000				-1.041	-3.642	.002
Prof	-1.010	-5.524	.000				-.965	-4.613	.000
Size	-.384	-1.296	.204				-.408	-.595	.558
FL				1.512	.740	.466	1.987	1.568	.132
IR				-.388	-1.671	.106	.128	.605	.551
CVROE				-.162	-.599	.554	.124	.715	.483
MFR				-.062	-.215	.831	.057	.236	.816
HFR				-.287	-1.028	.313	-.230	-1.302	.207
MFRFINLIV				-1.220	-.744	.463	-1.803	-1.790	.088
MFRIR				.692	3.376	.002	-.025	-.135	.894
MFRCVROE				.154	.860	.397	.180	1.364	.187
HFRFINLIV				-1.003	-.849	.403	-1.077	-1.490	.151
HFRIR				.713	3.388	.002	-.193	-.646	.525
HFRCVROE				.342	1.315	.199	-.101	-.577	.570
R Square	.832			.582			.902		
Adjusted R Square	.795			.418			.819		
F	22.646			3.550			10.774		

For all models R^2 is high. In model-1 all are significant except size. In model-2 HFRIR and MFRIR is significant and are positively correlated. In full model income variability and profitability are significant and negatively correlated.

FINDINGS

The use of Debt in capital structure is determined by the profitability, size of the business, tangibility, non-debt tax shields, growth opportunity, agency cost, income variability in all the sectors considered.

High risk firms across sectors use higher debt and their profitability is low. Medium risk and low risk firms use lower debt. It has emerged that degree of financial leverage, interest risk and volatility in ROE has collective impact on determining the level of debt financing in capital structure. But negative relation is found in food and media sector.

CONCLUSION

The relationship between financial risk factors and debt financing in capital structure among firms with low, medium and high financial risk using three regression models, first one with only control variables, second one with only financial risk variables as well as dummy and interaction variables for risk level, and third one with full model by including both control and financial risk variable were evaluated. From the estimated results, it is concluded that financial risk variables, particularly interest risk followed by volatility in ROE has significant effect on determining the additional variation in use of debt financing in business through long-term sources among firms under all selected sectors. This study is limited only to few sectors and selected companies in those sectors. Further study can be carried out considering both operating and financial risk and its combined effect on the value of the firm.

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BRIDGING INDUSTRY ACADEMIA GAP THROUGH SKILL DEVELOPMENT**SUGANDHA KHANDELWAL****RESEARCH SCHOLAR****DEPARTMENT OF ECONOMIC ADMINISTRATION & FINANCIAL MANAGEMENT****UNIVERSITY OF RAJASTHAN****JAIPUR****Dr. MAMTA JAIN****ASSOCIATE PROFESSOR****DEPARTMENT OF ECONOMIC ADMINISTRATION & FINANCIAL MANAGEMENT****UNIVERSITY OF RAJASTHAN****JAIPUR****ABSTRACT**

In the current scenario where business complexities are changing at a fast pace, it is necessary that the industry and the academia to develop close links to build the alliance. It is observed that the changing complexity of the business environment has necessitated the industry and the academia to develop close links to create the synergy. The interface between these two has led to increasing mutual dependence to ensure their better survival in their domains. It is estimated that the average age of the population in India by 2020 will be 29 years as against 40 years in USA, 46 years in Europe and 47 years in Japan. To reap this demographic dividend which is expected to last for next 25 years, India needs to equip its workforce with employable skills and knowledge so that they can contribute substantively to the economic growth of the country. The basic objective of the study is to analyze the skill requirements of the Industry and to examine the mechanisms for bridging the gap between academia and industry. This paper studies that India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth. Secondary sources are used for the study.

KEYWORDS

bridging gap, demographic dividend, employability, industry academia interface, skill development.

JEL CODE

J24

INTRODUCTION

Human resources are considered to be the most precious asset for all countries in the world. The socio-economic development of any country depends on the size, quality, competencies and capabilities of human resources. Human resources are significant in realization of nation's goals like removal of poverty, rapid economic growth.

There has been an increasing awareness about the role and responsibility of education during the last few years. It is becoming a matter of concern in many countries as to how educational systems were organized and administered. Indian higher education system contributes about 350,000 engineers and 2.5 million university graduates annually to our workforce. But rate of unemployment is very high. About 75% of technical graduates and 80-90% of university graduates remain unemployed. India currently faces a severe shortage of well-trained, skilled workers. It is estimated that only 2.3% of the workforce in India has undergone formal skill training as compared to 68% in the UK, 75% in Germany, 52% in USA, 80% in Japan and 96% in South Korea.

Industrial world is becoming dynamic and innovative day by day. A rapid developing knowledge based service economy with management oriented professionals is required in today's era. In India, prior to 60's, courses related to management education were not offered as a separate area of specialization. Employees in the businesses were mostly graduates or postgraduates. Importance of business education was realized with the establishment of two Indian Institutes of Management; IIM Calcutta in association with Sloan School of Management and IIM Ahmedabad with Harvard Business School.

There has been a relatively slow but steady growth in number of schools and popularity of business education in India. With liberalization in 1991, players in the global world were allowed to invest in India. This led to opening of large number of business schools in India. Many multi-nationals entered India bringing increased demand for professionals with them. Business education now moved beyond the domains of government control with establishment of many private institutions.

Since India is a growing economy, large business houses and industrial players throughout the world are looking forward for investment and expansion here. This arouses a need for people who are ready-for-the-job. But contrary to this, there is a strong need to enhance skills in large number of employees in changing scenario. If industry play active role in sharing the know-how, expertise and academia developing programmes, then only employees can be skilled, re-skilled or up-skilled.

STATEMENT OF THE PROBLEM

Today all economies need skilled workforce so as to meet global standards of quality, to increase their foreign trade, to bring advanced technologies to their domestic industries and to boost their industrial and economic development. Thus, skills and knowledge becomes the major driving force of socio-economic growth and development for any country. As it has been observed that countries with highly skilled human capital tend to have higher GDP and per capita income levels and they adjust more effectively to the challenges and opportunities of the world of work.

Knowledge and skills development is important for growth of organizations as organizations are valued not only on their physical but on their intellectual capital. Untrained or poorly trained employees add more to cost whereas well-trained employees prove to be a valuable commodity that can be viewed as an investment rather than as an expense as they can produce high returns. Training and development enhances the company's ability to adopt advanced technology because of highly knowledgeable staff. Organizations can build efficient, effective and highly motivated team, which enhances the company's competitive position and improves employee morale. India currently faces a severe shortage of well-trained, skilled workers. Large sections of the educated workforce have little or no job skills, making them largely unemployable.

Academia- Industry Interface could be defined as interactive and collaborative arrangement between academic institutions and business corporations for the achievement of certain mutually inclusive goals and objectives. Industry interface is indeed the most critical differentiator for educational institutions worldwide. Today corporations are strongly emphasizing on finding the "right person" which compel academia to think more carefully on whom they hire. So the academic institutions should have made students to undertake industry projects, presentations, case studies, research work and work as trainees to get practical experience of industrial working environment.

REVIEW OF LITERATURE

- 1) Lokesh Mehra (2015) in the article "Bridging the skills gap with industry: Academia partnerships" focused on shortage of skilled labour in various organizations in the country. The reason behind it is high dropout ratio of students after school education. Multinationals are establishing alliance with academic institutions on specific initiatives covering faculty upgradation, internships, curriculum revision etc. to cope up the problem of skill shortage.
- 2) Tammy de Boer (December, 2014) in her study "Bridging the gap between academia and industry- a collaborative partnership" concluded that industry and academia must work together which lead to innovation thereby enhancing economic development. There should be open communication and collaboration between industry and academia to understand and address the qualities and skills required.
- 3) Neeti Sharma (June, 2014) stressed on unemployability of graduates and postgraduates on one hand and vacant positions in the industries on other hand in the article " Bridging the industry - academia gap". Few ways were suggested for developing skills through education system like increasing enrolment ratio in higher education, matching curriculum to industry requirements, internships to give workplace exposure, shared job model with recurring participation etc.
- 4) Marilynn Larkin (April, 2014) illustrated some companies that have collaborated with educational institutions in the article "Building successful partnerships between academia and industry". The components for successful strategic partnerships were discussed. Innovation and incubation in academic field was given importance.
- 5) Prachi Kapil (August,2013) in the study "Bridging the Industry-Academia Skill Gap A Conceptual Investigation with special emphasis on the Management Education in India" highlighted some initiatives required to accelerate independence between academic and industrial prospects in India. He suggested some efforts in bringing higher educational institutions and industry together ensuring quality on both sides.
- 6) Pankaj Jalote (2013) in the article "Challenges in industry -academia collaboration" suggested different types of possible collaborations in Indian scenario like producer- consumer interaction, collaboration in continuing education, collaboration in research etc. Both industries and institutions must spend time together to understand each others' context and develop a common language.
- 7) Ryan Raver (September, 2012) have evaluated reasons for industry academia gap and given suggestions to overcome the problem in the article "One step at a time: Bridging gap between Academia and Industry". It was suggested that students pursuing doctoral programs should be provided internship in multinationals. Academia- industry interaction should be considered as part of education.
- 8) Arolkar and Patil (2003) studied several economic reform measures that have posed many challenges to business enterprises in their paper "Entrepreneurship Education and Employment: A Missing Link". He stated the economic reform measures that have been aimed at transforming the economy from controlled to decontrolled, investment to disinvestment, regulation to management, nationalization to privatization, domestic trade to foreign trade, permanent to contract, etc. have bring out many challenges to industry.
- 9) Bruce Prideaux (2001) in the article "Bridging the gap between academic research and industry research needs" examined how research is produced and used by government, industry and academia. Comparison of business and academia research has been made in the study. Some strategies were suggested to bridge the gap between academic and industry needs

OBJECTIVES OF THE STUDY

1. To study the various skill development programmes launched by government.
2. To study the skill requirements of the Industry.
3. To examine the mechanisms for bridging the gap between academia and industry.
4. To understand the student's perception towards the Industry- Academia interface and to analyze the benefits from its mode.
5. To evaluate the various skills development programmes being run in academia.

NEED FOR SKILL DEVELOPMENT

The need of skill development was realized after liberalization. Prior to liberalization the demand for goods and services was higher than their supply as there was scarcity of raw materials, capital and technology. The growth and expansion of industrial activities could hardly be seen. Quantity was given more importance than quality. Now, the scenario has changed and quality is considered more important than quantity. To meet rising expectations of people, skill development is required along with its continuous upgradation.

Framework of international business is becoming more integrated and independent due to falling barriers to international trade and investment. To retain global competitiveness in current scenario, demand for new and constantly developing skills is increasing.

Deficiency of human intellectual capital which is necessary to manage and sustain rapidly transforming economic enterprises and capital markets is faced by India and other developing countries. In spite of increased investment in education and training by the government, efforts are inadequate to address the demand of corporate sector. This raises the need for collaboration of employers and higher educational institutions to create modalities so that need for long term skills and business could be met out.

After completing higher studies, students fantasize of lucrative job but it turns into plethora of rejections at the placement sessions. The employers are giving more emphasis on competency skills rather than academic knowledge in recruiting employees. They are looking for skills like problem solving, decision making and multi-tasking. Industry oriented environment should be provided during academic tenure so that the students get adaptive to that and the skills and competencies come naturally to them.

FICCI carried out a survey with World Bank in 2009 to check the employer's satisfaction quotient for new engineering students and found that more than 60 % of employers were not satisfied by the skills of graduates. A similar survey was carried out with Synovate in 2010 to check the employability of graduates and it also reported dissatisfaction from employers towards quality of general students.

SKILLS BUSINESS ENTERPRISES LOOKING FOR FOLLOWING

- **Marketing Skills:** Earlier, marketing was seen as selling activity. Goods and services produced by the enterprises were made available to the people. But with changing scenario, the concept of 'Buyer Beware' has changed to 'Seller Beware'. Now, it's not the producers but the customers who decide what, when and how much to produce. Marketing team of business organizations has to focus on their prospective customers, their needs and expectations, likes and dislikes, purchasing habits, sentiments, attitude etc. Accordingly, they have to ensure the right product at the right price, at the right place, at the right time for the right prospects. Consumer expects a wide range of variety with multiple features at a competitive price, consumer care and satisfaction, excellent after sales service and quick complaint redressal. This transformation has affected marketing function of every industry posing tough challenges for survival, success and future progress of enterprises. To achieve outstanding performance in marketing of goods and services, enterprises expect marketing team to be hard-working, ambitious, travelling lovers, working overtime; prompt enough to provide adequate and reliable information. They require skills like understanding customers, impressing upon them, respecting and caring them, smiling at them, keeping long lasting continued relation with customers and foreseeing for prospective customers.
- **Communication Skills:** In today's world, where science and technology are getting advanced day by day, communication plays an important role in every walk of life. Communication plays an important role in meeting challenges like customer satisfaction, customer delight, customer retention, rising crisis etc. which is necessary for survival and growth in competitive world. For effectiveness in organization, there should be effective and healthy communication skills among the workers, among the employees, among the managers and between the superiors and subordinates across all the levels. The enterprises expect skills like clarity in company's vision, mission and objectives, vocabulary, basics of knowledge, knowledge of body language, knowledge of daily events, clarity

in message, presence of listening rather than hearing, holding receiver's attention, initiating few informal and friendly conversation prior to real communication, politeness in communication, recognizing the importance of the receiver and communicating negative things in positive way.

- **Leadership Skills:** Leadership is a process wherein managers influence employees to work for achieving organizational goals and objectives. In today's competitive world it is very difficult to manage human resources and project their individual interest towards organizational objectives. The future and success of any organization depends upon how leaders understand, guide, help, lead, motivate and direct employees. Organizations expect leaders to have certain skills like appreciating workers; listening patiently to aggrieved workers; telling good things of employees in public and weaknesses in person; making workers easily accessible to managers; guiding and clearing doubts of workers in difficulty; helping and assisting workers when they are multitasking.
- **Transferable Skills:** Transferable skills are the skills and abilities that are relevant and helpful across different departments of organization. Employers usually look for portable skills like communicating effectively in variety of situations, showing initiative, creativity and integrity and having a good work attitude which are valuable across all industries. A person with multifaceted skills will have better prospects of employability.
- **Analytical Skills:** Analytical skills refer to an ability to make a critical and in-depth inquiry into the different problems. Organizations require the employees with ability to visualize articulate and solve both complex and uncomplicated problems and concepts and make decisions that are sensible and based on available information. These skills are accountable for results, competitive environment, complexity of business environment, increase in customer data and risk management. Thus, analytical skills assume importance in arriving sound and healthy decisions.
- **Interpersonal Skills:** Interpersonal skills refer to ability of individuals to communicate with other people properly and effectively. In an organization, all employees have to interact with their colleagues, subordinates, superiors and stakeholders. The overall success of any organization depends on the working relationship with each other and on how good, how decent and how polite individuals interact with others. Employers often seek to hire staff with '*strong interpersonal skills*'. They want people who will work well in a team and are able to communicate effectively with colleagues, customers and clients.
- **Presentation Skills:** The success of any organization depends not only on internal forces like employees, capital, managers, systems and procedures but external forces like customers, creditors, rating agencies, bankers etc. also affect it. To make corporate world aware about organization's qualities, strengths, standards, achievements and capabilities; presentation and projections in most impressive, convincing and effective manner is to be prepared. For an effective and impressive presentation; the traits like confidence, involvement, proficiency of language, word power, positive approach, thorough studies and meticulous planning are required in personnel.
- **Technical Skills:** A thorough knowledge and repairing abilities pertaining to machines in the employees is required by the managers. The people with thorough knowledge and repairing abilities will have better scope of employability than those with either of these.
- **Conceptual Skills:** It is the ability to think creatively about, analyze and understand complicated and abstract ideas. Using a well-developed conceptual skill set, top level business managers need to be able to look at their company as a holistic entity, to see the interrelationships between its divisions, and to understand how the firm fits into and affects its overall environment.
- **Writing Skills:** Good writing skills allow employees to communicate their message with clarity and ease to customers than through face-to-face or telephone conversations. Employees with good writing skills can write a report, plan or strategy at work with more efficiency and effectiveness.

HYPOTHESES OF THE STUDY

1. Introduction of skill development in higher education will increase employment opportunities leaving high impact on growth of the economy.
2. Bridging industry academia gap through skill development would enhance quality on both sides.

RESEARCH METHODOLOGY

The research involves data collection through both primary and secondary sources. The primary sources mainly include semi-structured interviews, questionnaire and notes from archival documents like files, letters and memos. The empirical part of the study involved investigation through structured questionnaire consisting questions related to faculty, industry and students; exploring hypotheses through quantitative and qualitative data and information gathered; analysis of primary and secondary data; information from industry, government, and different websites of government departments, academic institutions and industry associations. The other sources of data used in the study are the various documents and reports of the Government published by the Ministry of Human Resource Development, Planning Commission, All India Council for Technical Education (AICTE) and the University Grants Commission (UGC). In addition, relevant published books, research papers and articles have been looked into.

STATUS OF SKILL UNIVERSITIES

A. IN DEVELOPED AND DEVELOPING COUNTRIES

There are no Universities in the name of Skill University in foreign countries. However, developed countries have a massive system of manpower development for various sectors of economy. Technical and vocational education and training programmes in these countries can be grouped in the following 4 categories of models:

1. The liberal market economy model (in England)
2. The state regulated bureaucratic model (in France)
3. The dual- corporatist model (in Germany)
4. Apprenticeship model in many developed countries

In addition to the above, in countries like USA and Canada, there are Community Colleges, which offer a variety of vocational courses at Associate Degree level.

B. IN INDIA

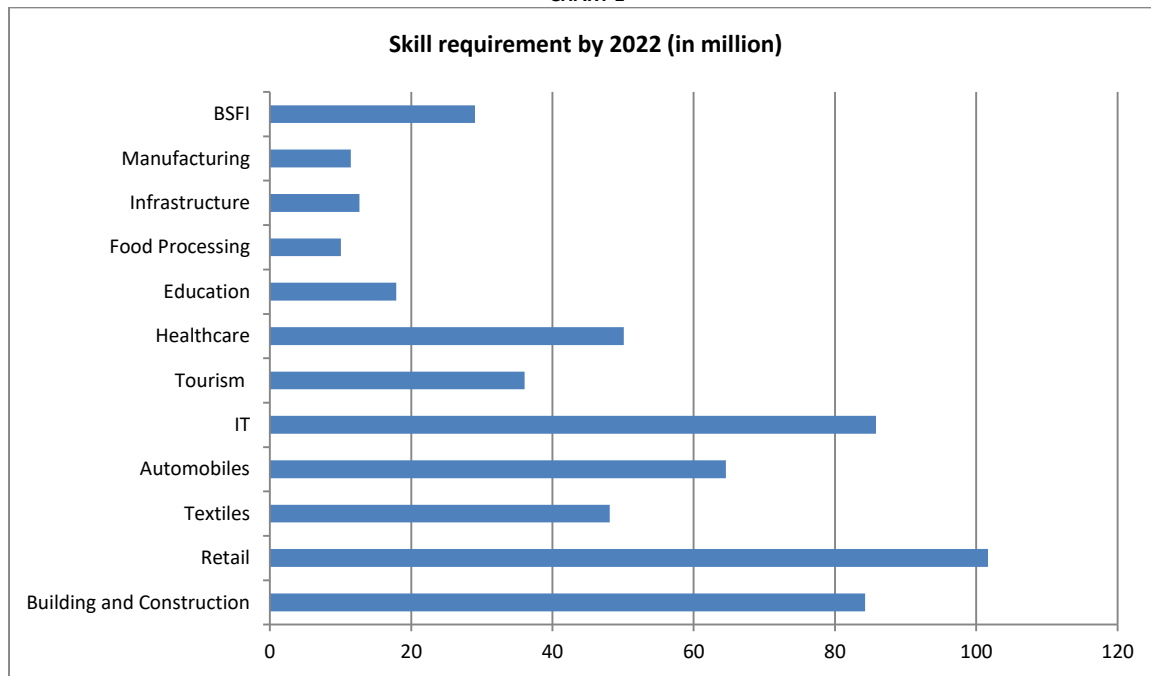
Gujarat, Karnataka and now Rajasthan have announced establishment of skill/ vocational university in the country. In addition, integrated furniture maker "Timbor Home Ltd.", Ahmedabad, Gujarat has announced setting up of a Skill Varsity to offer courses to meet manpower needs of Indian furniture industry.

- GUJARAT: Gujarat was the first state to recognize the need of skill training and continuous up gradation of skills of existing workforce to face globalized competition and therefore decided to set up a skill university. Team Lease Skills University is the first vocational university of India. It offers skill based programs like Certificate, diploma and degree courses in mechatronics and allied multi skill manufacturing disciplines, IT infrastructure and hardware, finance, accounting services and operations, hospitality and tourism. The programs will enhance employability of these students and provide human resource to the fast growing manufacturing and services sectors in Gujarat. TLU programs will provide vertical link to the pass- outs of Vocational Secondary Higher Schools as well as ITI candidates, which can synergize enrolment in these institutions.
- KARNATAKA: Apex Vocational University was established at Ramnagar to fulfil skill gap in India's work force. The university will focus on vocational education and skill development/ training and offer quality education through four classrooms- physical, satellite, e-learning and on- the- job.
- RAJASTHAN: The state government has announced establishment of Skill University in its budget announcement 2014-15. The proposed university may take into consideration the work done by Sector Skill Councils; need to align qualifications to National Skill Qualification Framework and skill gap studies and their findings.
- WEST BENGAL: Seacom Skill University was established at Birbhum which offers Engineering and Technical Education with maximum industry orientation and more stress is being given on practical skills, aiming at building greater confidence in students. The university emphasizes on achieving international distinction for research intensive education, excellence and values.
- OTHER STATES: There are no proposals in public domain for setting up of skill universities in remaining states and UTs. But, many states have set up institutes of Vocational Studies or established Vocational Colleges. To meet manpower needs of different sectors, each state has number of ITIs, Polytechnic, Engineering, Nursing, Dental, Pharmacy, Hotel Management institutions in the country. In addition to these sector based institutions, there are many diploma and degree programmes awarding institutions which are sort of vocational in nature.

PROJECTED SKILL REQUIREMENT BY 2022

Skill requirement in some major sectors by 2022 is estimated as below:

CHART 1

**CHALLENGES**

The existing curriculum of universities and educational institutions is obsolete and irrelevant that does not fit in the changing technological and competitive environment. Due to wide disconnection between skills provided and skills required by the industry, skill demands of the service as well as the organized sector remains largely unmet. Students do not get practical exposure to industrial environment during their academic period. Because of this, companies have to spend extra money and time to orient and train fresher's. To equip new students with high information and industry acquainted knowledge, competency is to be increased in transformational leadership, business ethics and values.

INITIATIVES TAKEN BY THE GOVERNMENT TO BRIDGE INDUSTRY ACADEMIA GAP

- Some government organizations such as Defence fund a range of pure and applied research.
- Departments such as health, education and environment are major research users and often engage academic researchers.

GOVERNMENT SCHEMES FOR SKILL DEVELOPMENT

- ❖ **National Policy for Skill Development and Entrepreneurship:** The primary objective of this policy is to meet the challenge of skilling at scale with speed, standard (quality) and sustainability. It aims to provide an umbrella framework to all skilling activities being carried out within the country, to align them to common standards and link skilling with demand centres. In addition to laying down the objectives and expected outcomes, the policy also identifies the overall institutional framework which will act as a vehicle to reach the expected outcomes. The policy links skills development to improved employability and productivity in paving the way forward for inclusive growth in the country. The skill strategy is complemented by specific efforts to promote entrepreneurship in order to create ample opportunities for the skilled workforce.
- ❖ **Craftsmen Training Schemes:** The scheme includes imparting skills in various vocational trades to meet the skilled manpower requirements for technology and industrial growth of the country. Several new private ITIs were established in 1980's in southern states mostly in Kerala, Karnataka and Andhra Pradesh, etc. from where trained craftsmen found placement mainly in Gulf countries. At present, there are over 10,750 ITIs (2275 in Govt. & 8475 in Private Sector) having a total seating capacity of 15.22 lakhs.
- ❖ **Apprenticeship Training Schemes:** The objective of this scheme is to regulate the programme of training of apprentices in the industry so as to conform to the syllabi, period of training etc. as laid down by the Central Apprenticeship Council and to utilise fully the facilities available in industry for imparting practical training with a view to meeting the requirements of skilled manpower for industry.
- ❖ **Skill Development Initiative Scheme:** The objectives of the scheme are to provide vocational training to school leavers, existing workers, ITI graduates, etc. to improve their employability by optimally utilizing the infrastructure available in Govt., private institutions and the Industry. Existing skills of the persons can also be tested and certified under this scheme. It also focuses on building capacity in the area of development of competency standards, course curricula, learning material and assessment standards in the country.
- ❖ **Pradhan Mantri Kaushal Vikas Yojana:** The objective of this skill certification and reward scheme is to enable and mobilize a large number of Indian youth to take up outcome based skill training and become employable and earn their livelihood. Under the scheme, monetary reward would be provided to trainees who are successfully trained, assessed and certified in skill courses run by affiliated training providers. Skill training under PMKVY would essentially target drop out students after class 10 and class 12.
- ❖ **UDAAN:** The programme aims to provide skills training and enhance the employability of unemployed youth of J&K. The Scheme covers graduates, post graduates and three-year engineering diploma holders. Its objectives are to provide an exposure to the unemployed graduates to the best of Corporate India and to provide Corporate India, an exposure to the rich talent pool available in the State. Up to July 10, 2015 10,555 have joined this training program out of which 4984 have got placement.
- ❖ **Standard Training Assessment and Reward Scheme:** The objective of this scheme is to encourage skill development for youth by providing monetary rewards for successful completion of approved training programs.

EXPECTATIONS FROM EDUCATIONAL INSTITUTIONS

- Dual specialization should be introduced for marketing and finance as both are interdependent.
- Students should be encouraged to attend national seminars and association membership should be given for their personal and holistic development.
- Students having different academic background and work experience should be given different learning and training methods.

- Practical knowledge should be imparted through better industry interface along with theoretical knowledge so that leadership skills are imbibed in the students.
- The curriculum should be framed in consultation with industry experts.
- Live research should be conducted in educational institutions to enhance understanding and applicability among students.
- Motivation, leadership and competency traits should be deeply rooted in the personality of students along with practical know how of laws, labour, legislations, and compensation management.
- Teaching should not be considered just a job; rather it should be viewed as a source of contentment.
- Teachers should have periodic interaction with industry.
- Selection of teachers should be on basis of their ability to transmit new learning and quality of industry exposure rather than degrees and doctorates.
- There should be 50:50 ratio of core to visiting/ industry faculty.
- Use of live case studies with pre-defined standardization of level/ quality/ relevance should be enforced.
- Research and development activities should be frequently carried on which will lead to innovative learning experience thereby enhancing personality growth of both students and faculty.

FINDINGS

On the basis of primary data gathered through structured questionnaire, some conclusion in the form of findings has been drawn:

- ❖ Academicians and industrialists have different perspectives and expectations.
- ❖ Academics seldom attend industrial conferences.
- ❖ Academics are not aware of the problems and constraints of industry.
- ❖ High speed changes are taking place in the world of technology but universities and educational institutions are unable to update their syllabi accordingly.
- ❖ Industry seeks the minimum solution to minimize their risk, whereas Academia strives for a maximum solution to maximize their recognition.
- ❖ International tie-ups with reputed foreign universities should be done to provide opportunities to our students for international internship, summer school programs, semester exchange etc.
- ❖ Skilling should be integrated with formal education at secondary education level by introducing vocational training classes.
- ❖ Generation of knowledge will take place rather than distribution of knowledge.

CONCLUSION

It is essential to have industry-academia interactions which will help to impart relevant knowledge and will be sustainable in the changing conditions. In order to bridge the industry academia gap, identification of different sectors and job roles should be done. Implementation model should be developed and should be integrated into curriculum as per university norms.

Sector skill councils should provide training to trainers. Various capacity building seminars and workshops should be organized timely. Students should be provided with orientation sessions so that they can select their job roles as per their career aspirations. Internships and on-the-job training should be provided to the students and their assessment and certification should be done by Sector Skill Councils. It would thereby help in building employment and entrepreneurship opportunities. The industry-academia gap could also be bridged by increasing the enrolment ratios in higher education.

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PERFORMANCE EVALUATION OF INDIAN MUTUAL FUND SCHEMES AND ITS IMPACT ON INVESTMENT DECISION

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DEOGARH

ABSTRACT

In India capital market gives a diversity of investment alternatives to the stakeholders to support them to invest in different investment tools and to make positive the profitable return. Along with diverse range financial products, mutual fund ensures the maximum return and minimum risks to the investors. Development of various mutual fund schemes in the Indian capital market has proved to be one of the most catalytic investment avenue in generating significant investment growth. Over the past years, a number of technical and theories for analysis has evolved; these combined with modern technology guides, which serve the purpose of an investor. The giant players in the market, like Foreign Institutional Investors, Mutual Funds, etc. have the expertise skill and access for various analytical tools and make use of them. Most of the small investors are not in position to benefit out from market the way Mutual Funds do. This article focused on investors' investment decision making towards mutual funds by using of Statistical tools and ratio analysis of mutual fund schemes of selected banks. Also the research findings will useful to the Mutual Fund Companies in terms of understand their performance among the mutual fund companies in the market.

KEYWORDS

capital market, stakeholders, mutual fund, foreign institutional investors.

JEL CODE

G11

INTRODUCTION

Mutual Funds is a topic which is of enormous interest not only to researchers all over the world, but also to investors. Mutual funds as a medium-to-long term investment option is preferred as a suitable investment option by investors. However, with several market entrants the question is the choice of mutual fund. The study focuses on this problem of mutual fund selection by investors. Though the investment objectives define investor's preference among fund types (balanced, growth, dividend etc.) the choice of fund based on a sponsor's reputation remains to be probed. Indian mutual fund industry has two distinct types of sponsors, public-sector and private-sector. The Securities and Exchange Board of India (SEBI) regulations 1993, defines a "mutual fund as a fund in the form of a trust by a sponsor, to raise money by the trustees through the sale of units to the public, under one or more schemes, for investing in securities in accordance with these regulations". A mutual fund is a professionally-managed form of collective investments that pools money from many investors and invests it in stocks, bonds, short-term money market instruments, and other securities. In a mutual fund, the fund manager, who is also known as the portfolio manager, trades the fund's underlying securities, realizing capital gains or losses, and collects the dividend or interest income.

The statistics revealed that the world mutual fund industry managed financial assets of \$25.59 trillion and the number of mutual funds has also grown to 73343 funds worldwide at the end of March 2012, including 28358 equity funds contribute nearby 38% of total scheme. The Indian mutual fund industry has gained immense experience and continues to reinvent itself gradually, exhibiting steady growth over the last decade. The mutual fund industry in India began with setting up of the Unit Trust of India(UTI) in 1964 by the government of India. In 1987 public sector banks and two insurance companies (LIC and GIC) were allowed to launch mutual fund. Securities Exchange and Board of India (SEBI), regulatory body for Indian capital market, formulated comprehensive regulatory framework for Mutual funds in 1993 and allowed private corporate bodies to launch mutual fund schemes. Opening up the industry door to private sector banks and financial institution in 1993 had ushered in a new era in the evolution of Indian mutual fund sector. Foreign asset management companies were also allowed to setup their funds. With the entry, competitive efficiency in the industry showed a tremendous improvement and led to an applicable increase in the number and variety of scheme offered to the investors in terms of risk return preferences, maturity period and tax benefits. Asset under management (AUM) of the industry registered an increase from 47000 crore in March 1993 to a mind boggling nearby Rs. 670000crore in March 2012. As per the report if Association of Mutual Funds of India (AMFI), there were 44 mutual fund houses covering Indian public sector and joint ventures with foreign players as against only 9 public sector mutual funds in 1993. The industry has recorded a compound annual growth rate of 15.43% in asset under management over the period of March 2007 to March 2012, at the same time when stock market and financial institution witnessed the heavy crushed by financial crisis.

REVIEW OF LITERATURE

Sharpe (1966) suggested a measure for the evaluation of portfolio performance. Drawing on results obtained in the field of portfolio analysis. Economist Jack L Treynor suggested a new predictor of mutual fund performance, one that differs from virtually all those used previously by incorporating the volatility of a funds return in a simple yet meaningful manner. Jensen (1967) derived a risk adjusted measure of portfolio performance (Jensen alpha) that estimates how much a manager's forecasting ability contributes to a fund's returns.

Gupta LC (1981) presented a detailed and well-based estimate of "Portfolio" rate of return on equities. This pioneering study in the Indian context has been a major contribution in this field and is regarded as the bench-mark on the rate of return on equities for the specified time. He laid the basis of rate of return concept in performance evaluation.

Sarkar and Mazumdar (1995) evaluated financial performance of five close ended growth funds for the period February 1991 to August 1993. They concluded that the performance was below average terms of alpha values and statistically not significant and fund possessed high risk.

Bers and Madura (2000) examine the performance persistence of 384 domestic closed-end funds in the United States. The sample includes 115 taxable bond funds, 67 equity funds, and 202 municipal bond funds. They employed the regression test to assess the persistence of performance over the periods. They found net asset value based performance persistence and market price based performance persistence for each type of closed-end fund over 12-, 24-, and 36-month holding periods. The results differ slightly between fund groups and over different holding periods.

Sathya Swaroop Debashish (2009) measured the performance of the equity based mutual funds in India. 23 schemes were studied over a period of April 1996 to March 2009 (13 years). The analysis was done on the basis of mean return, beta risk, and coefficient of determination, sharp ratio, Treynor ratio and Jensen alpha. The first analysis has been done on the basis of returns, followed by a comparison between market returns and the return on schemes. It was concluded that UTI mutual fund schemes and Franklin Templeton schemes have performed excellently in public and private sectors respectively. Further, on the basis of the parameters like Sharpe ratio

Selvam et.al (2011) studied the risk and return relationship of Indian mutual fund schemes. The study found out that out of thirty-five sample schemes, eleven showed significant t-values and all other twenty-four sample schemes did not prove significant relationship between the risk and return. According to t-alpha values, majority (thirty-two) of the sample schemes' returns were not significantly different from their market returns and very few number of sample schemes' returns were significantly different from their market returns during the study period.

Dr. B. Nimalathasan, Mr. R. Kumar Ghandhi (2012) studied the financial performance analysis of mutual fund schemes (equity diversified schemes and equity mid-cap schemes) of selected banks. The objective of this research work is to analysis the financial performance of selected mutual fund schemes through the statistical parameters (Standard Deviation, Beta and Alpha) and ratio analysis.

OBJECTIVES OF THE STUDY

1. To study the suitability of investment opportunity of different mutual fund schemes provided by some selected Banks like State Bank of India, Canara Bank, ICICI Bank, HDFC Bank.
2. To evaluate the investment performance of Indian mutual funds with risk adjustment by using Standard Deviation, Beta, Sharpe Ratio, William Sharpe, Treynor and Jensen measure.

SCOPE OF THE STUDY

1. The Schemes were categorized and selected for evaluating their performance and relative risk.
2. The scope of the project is mainly concentrated on the top performing Mutual Fund Companies like State Bank of India, Canara Bank- Public Bank, ICICI Bank, HDFC Bank-Private Bank.

NEED FOR THE STUDY

Investment decision mainly depends upon the investor's attitude towards risk and return of each of the revenues investment. Planning & advisory plays an important role in facilitating an investor in investigating process. For advising an investor for investment, performance evaluation is necessary, hence the study is aimed at "Performance Evaluation of Indian Mutual Fund Schemes and Its Impact on Investment Decision."

RESEARCH METHODOLOGY

Data: The study is based on secondary data. The Secondary data sources include Fact sheets of Mutual funds, articles, newspapers, AMFI reports and websites.

Sample size: The 4 schemes are taken from selected Public banks (SBI & Canara Bank) and Private Bank (HDFC & ICICI) for 1 year. All the data used for analysis is taken from the period June-2015 to the period June-2016.

STATISTICAL TOOLS FOR ANALYSIS

Standard Deviation

Standard Deviation is a statistical tool, which measures the variability of returns from the expected value, or volatility. It is denoted by sigma (σ). It is calculated using the formula mentioned below:

It is used to measure the variation in the individual returns from the average expected returns over a certain period. Standard deviation is used in the concept of risk of a portfolio of investments. Higher standard deviation means greater fluctuation in expected return.

Standard deviation (SD) = \sqrt{Vvar}

Where Vvar = Variance

$$Vvar = \sum P(r_i - E(r))^2$$

Beta

Beta measures the systematic risk and shows. How prices of securities respond to the market forces. It is calculated by relating the return on security with return for the market, by convention, market have beta.0, Mutual Fund is said to be volatile, more volatile or less volatile. If beta is greater than the stock is said to be riskier than market. If beta is less than 1, the indication is that stock is less risky in comparison to market, if beta is zero then risk is the same as that of the market, Negative beta is rare.

$$\beta = \frac{n \sum xy - (\sum x)(\sum y)}{n \sum x^2 - (\sum x)^2}$$

Where n= number of days

X= rolling returns of the NSE index

Y= rolling returns of the schemes

Returns

Returns for the last one-year of different schemes are taken for the comparison analysis.

TOOLS FOR ANALYSIS

Sharpe's Index

Sharpe index measures risk premium of a portfolio, relative to the total amount of risk in the portfolio. Sharpe index summarizes the risk and return of a portfolio in a single measure that categorizes the performance often fiords on the risk-adjusted basis. The larger the Sharpe's index the portfolio over performs the market and vice versa.

$$S = \frac{R_p - R_f}{\sigma_p}$$

Where, S = Sharpe's index

R_p = Portfolio return

R_f = Risk free rate of return

SD = Standard deviation of portfolio

Treynor's Index

Treynor's model is one of the concepts of the characteristics straight line. The characteristics line has drawn between the market return and a specific portfolio without taking into consideration any direct adjustment for risk. It is also known as reward to volatility ratio is defined as:

The formula for Treynor's Index is:

$$T_P = \frac{\text{Risk Premium}}{\text{Systematic Risk Index}} = \frac{r_p - r_f}{\beta_p}$$

Where, T_p = Treynor's performance index, R_p = Portfolio's actual return during a specified time period, R_f = Risk-free rate of return during the same period, β_p = beta coefficient of the portfolio. Whenever $R_p > R_f$ and $\beta_p > 0$ a larger T value means a better portfolio for all investors regardless of their individual risk preferences. In two cases we may have a negative T value: when $R_p < R_f$ or when $\beta_p < 0$. If T is negative because $R_p < R_f$, we judge the portfolio performance as very poor. However, if the negativity of T comes from a negative beta, fund's performance is superb. Finally, when $R_p - R_f$, and β_p are both negative, T will be positive, but in order to qualify the fund's performance as good or bad we should see whether R_p is above or below the security market line pertaining to the analysis period.

Jensen's Performance Index

The absolute risk adjusted return measure was developed by Michael Jensen and commonly known as Jensen measure. It is mentioned as a measure of absolute performance because a definite standard is a set and against that the performance is measured. The standard is based on the manager's predictive ability. Successful prediction of security price would enable the manager to earn higher returns than the ordinary investor expects to earn in a given level of risk. The basic model of Jensen is given below:

$$R_p = \alpha + \beta(R_m - R_f)$$

R_f = riskless rate of interest

β = a measure of systematic risk

R_p = average return of portfolio the intercept

R_m = average market return

Information Ratio

The Information ratio is a measure of the risk-adjusted return of a financial security. The information ratio is often used to gauge the skill of managers of mutual funds, hedge funds, etc. A high ratio means a manager can achieve higher returns more efficiently than one:

$$IR = \frac{\text{Alpha}}{\text{Standard Deviation}}$$

DATA ANALYSIS AND FINDINGS

Finding of the Research work plays the crucial role or part in the research paper. Likewise, in this article also present the research finding based on the secondary data.

COMPARISON AMONG TAX SAVING SCHEMES- BY RATIO ANALYSIS AND STATISTICAL ANALYSIS

These schemes offer tax rebates to the investors under specific provisions of the Income Tax Act, 1961 as the Government offers tax incentives for investment in specified avenues. e.g. Equity Linked Savings Schemes (ELSS). Pension schemes launched by the mutual funds also offer tax benefits. These schemes are growth oriented and invest pre-dominantly in equities. Their growth opportunities and risks associated are like any equity-oriented scheme.

TABLE 1: COMPARISON AMONG TAX SAVING SCHEMES - RATIO ANALYSIS

Bank/Scheme Name	Treynor Ratio	Rank	Sharpe Ratio	Rank	Information Ratio	Rank
Canara Robecoquity TaxSaver	0.153	1	0.033	1	0.0250	1
HDFC Tax Saver	-0.0636	2	-0.0156	2	0.0055	2
ICICI Prudential Tax Plan	-0.1181	4	-0.0278	4	-0.0104	4
SBI Magnum Tax Gain Scheme 93	-0.078	3	-0.020	3	-0.0030	3

Source: Authors calculation by using Secondary Data i.e. Annual Report.

Canara Bank sponsored Canara Robeco Equity Tax Saver has a higher Treynor's ratio and expected to perform well among the other tax saving schemes. Canara Bank sponsored Canara Robeco Equity Tax Saver has a higher Sharpe's ratio & expected to perform well among the other tax saving schemes. Canara Bank sponsored Canara Robeco Equity Tax Saver has a higher Information ratio & expected to perform well among the other tax saving schemes.

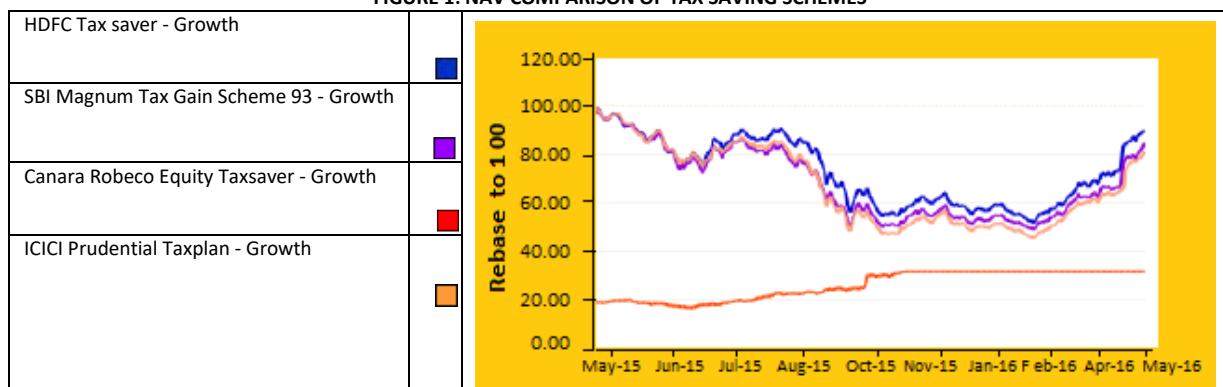
TABLE 2: COMPARISON AMONG TAX SAVING SCHEMES- STATISTICAL ANALYSIS

Fund Name	Variance	Standard deviation	Rank	Jenson Alpha	Rank
Canara Robeco Equity TaxSaver	9.828	3.135	3	0.0780	1
HDFC Tax Saver	7.888	2.809	1	0.0155	2
ICICI Prudential Tax Plan	9.087	3.014	2	-0.0314	4
SBI Magnum Tax Gain Scheme 93	10.03	3.17	4	-0.0090	3

Source: Authors calculation by using Secondary Data i.e. Annual Report.

HDFC offered HDFC Tax Saver scheme has a lower Variance and Standard deviation and is expected to be less risky among the other tax saving schemes. Canara Bank offered Canara Robeco Equity Tax Saver has the positive Alpha value of 0.0780 implies that the fund return has over performed the benchmark index by 0.0780 percent over the last one year.

FIGURE 1: NAV COMPARISON OF TAX SAVING SCHEMES



Source: Authors interpretation by using Microsoft Excel Graphical Representation.

CONCLUSION

Among Open-Ended (Tax Saving Schemes) The Canara Robeco Equity Tax Saver schemes is performing well in a particular scheme in banking sector. Whereas HDFC offered HDFC Tax Saver - Growth scheme has a lower Variance and Standard deviation and that is less risky among taken banking tax saving schemes.

DIRECTIONS FOR FUTURE RESEARCH

There is lot of scope for improvement in the research for evaluating mutual fund performances. Various other multi-criteria decision models could be tested for evaluating mutual fund performances. Testing of fund performances in the long run can be done. Extended sample of public-sector sponsored, private sector Indian sponsored and private-sector foreign sponsored mutual funds can be taken for generating results. Portfolio risk through the measure of value at risk (VaR) can also be tested for differences in mutual fund classes.

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A STUDY ON THE FACTORS DETERMINING ORGANIZATIONAL JUSTICE IN INDUSTRIAL ORGANIZATIONS WITH REFERENCE TO CHENNAI CITY

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ABSTRACT

The study aims to identify the factors determining Organizational Justice among the employees working in Industrial Organizations. Beyond its focus on perceptions of fairness, the other key element of organizational justice is the view that justice is a multi-dimensional construct. Organizational justice refers to an overall perception of what is fair in the workplace, composed of distributive, procedural, and interactional justice. The promotion of organizational justice can avoid negative consequences of staff turnover intentions and turnovers. Informational Justice was found to be the most predominant factor determining organizational justice in an industrial organization. This study is helpful in understanding the dimensionality of organizational justice.

KEYWORDS

organizational justice, fairness in the workplace.

JEL CODES

L10, M10, M12, D23.

INTRODUCTION

The economic wellbeing of an employee is determined based on the presence of Justice in an organization. For over three decades' organizational justice has been a major interest of researchers (Ambrose, 2002). Greenberg (1987) introduced organizational justice with regard to how an employee judges the behavior of the organization and their resulting attitude and behavior that comes as a result of this. Cropanzano and Greenberg defined organizational justice as "the perceptions and evaluations towards the compliance of organizational practices and related process and results". Employees perceive their organizations as just when they believe the outcomes they have received and the way in which the outcomes were received are fair. In other words, under organizational justice, fairness or equity can be subjective, and it resides in the perception of the person. When one person may see as unfair another may see as perfectly appropriate. Thus organizational justice tends to study how managers and their organizations are judged as fair or unfair by employees. Organizational Justice has been researched a lot, and a large number of studies have been supportive.

Organizational Justice is a refinement of equity theory. Equity theory is comparing one's outcome/input ratio with that of other and it causes equity sensitivity in individuals that finally decides the level of organizational justice (Stephen, 2006). The justice perceptions can be viewed from Adams' (1965) equity theory and Blau's (1964) social exchange theory. Both theories explain how individuals assess fairness by comparing their input-outcome ratios relative to that of comparable others. As a result of this comparison, they feel obligated to repay favourable benefits or treatment offered by their organizations. Organizational justice is conceptualized as a multi-dimensional construct. It is concerned with the perception of fairness and how it is either achieved or prevented through processes (procedural) outcomes (distributive) and implementation (interactional). It is significantly stated that people seek justice for its own sake and not just as a means to improve their pay check (Steven et al., 2006).

DIMENSIONS OF ORGANIZATIONAL JUSTICE

In the current business scenario, the corporate organization are deemed to have different practices and systems for ensuring the fair treatment of its employees. As said earlier, this concept Organizational Justice is a multi-dimensional construct. The perception of justice looks at the way the employees are treated fairly in the workplace. The perception of justice or fairness in an organization is measured by the three different components like distributive, procedural and interactional justice. The last dimension of Organizational Justice (interactional justice) is further divided into interpersonal justice and informational justice. Distributive Justice is mostly based on the Equity theory of Adams (1965) and it is about the individual's perceptions of his or her outcomes. Procedural Justice is about the perceptions of justice related with the decision making processes (Konovsky, 2000). Interactional Justice is about the perception of individuals related to the quality of interactive behavior during the practice of procedures constitutes the Interactional Justice (Yilmaz, 2004).

SIGNIFICANCE OF ORGANISATIONAL JUSTICE

The concept of "organizational justice" refers to the just distribution of organizational outputs depending on organizational relations (Ozmen et al., 2007). Research suggests that being treated unfairly undermines our self-esteem and social status, particularly when the injustice is known to others. The Organizational Justice literature grew dramatically during the 1990s (Colquitt & Greenberg, 2003). In fact, organizational justice was cited as the most popular topic of papers submitted to the organizational behavior division of the Academy of Management for several years during the mid- late 1990s (Colquitt & Greenberg, 2003, p.167). The behaviours of employees toward justice became an area of study by the increasing importance of concept of justice in the organizations (Greenberg, 1990). Organizational justice includes the perceptions of employees related to the rewards, results, decision making and participation in decision processes. The beliefs of workers about the Organizational justice, namely their beliefs about whether they are subject to a fair managerial process by their superiors affect their organizational behaviours (Yazicioglu and Topaloglu, 2009). Employees have significant roles in various decision making processes in the organizations. It is sometimes questioned whether the decisions towards employees are fair or not (Colquitt et al., 2001). Whilst much has been written on the theory of justice, there has been relatively little testing of the concepts empirically. Hence for these reasons organizational justice is considered to be very important.

REVIEW OF LITERATURE

Sookhan (2000) observes the words of Cobb on Organizational Justice as the heart of every social system, including the workplace perceptions of justice and fairness in ones organization always have impact. Rahman et al., (2015) elucidates that organizational justice is the focal point that denotes how people perceive fairness and justice in their organizations. Colquitt et al., (2009) posits that justice reflects the perceived fairness of an authority's decision making and also provides

behavioural evidence to authorities who treat employees more fairly are usually judged to be more trustworthy. According to Cropanzano et al., (2007) Organizational Justice has the potential to create powerful benefits for organizations and employees alike. Christine et al., (2013), emphasized that people need to be treated well (fairness). Stephen et.al, points out that Organizational justice is deeply rooted in equity theory. It was stated that people seek justice for its own sake, not just as a means to improve their pay check.

According to Rupp an industrial and organizational psychologist, organizational justice explores the psychological process by which employees come to judge their workplace as fair or unfair and also found that employees have a universal concern for fairness that transcends the self (Robin,2012). Angelo kinicki & Robert kreitner put forth their views on the role of Adams equity theory of motivation in explaining employee attitudes and behavior which led to a domain of research called Organizational Justice and it was found to reflect the extent to which people perceive that they are treated fairly at work. And this in turn had led to the identification of these different components of Organizational Justice i.e., Distributive Justice, Procedural Justice and Interactional Justice. And it was found that injustice or unfairness leads to dissatisfaction and Job turnover whereas on the other hand fairness or justice leads to organizational loyalty and attachment.

Soumendu Biswas (2011), noted that psychological climate will have a significantly positive influence on job satisfaction and job Involvement. It was found that Distributive Justice, Interactional Justice enhances an individuals level of job satisfaction. Through his study Biswas, proved that all the components of Organizational Justice enhances an individuals level of job satisfaction. In the workplace, employees generally consider distribution of work-related rewards and resources to be fair when they are consistent with expected norms of allocation such as equity, equality, and need (Colquitt,2001). Employees exert their efforts to their jobs and expect to be compensated (in salary, incentives, promotion, paid leave, etc.) in return. They compare their input to output ratio, and if their output is less than their input, they are in a perception of Distributional injustice. Mehmet & Yunus (2011) reiterated that procedural justice is the perception of the processes which are used to determine the decisions (Folger & Konovsky, 1989). Procedural justice also means an equal practices of organizational issues such as avoidance of unfair wages, commitment to decisions, knowledge sharing (Colquitt & Chertkoff, 2002).

Akiomi Inoue et al., (2009), also reiterates in the same vein that interactional justice reflects the degree to which people are treated with politeness, dignity, and respect by authorities (Greenberg In Cropanzano,1993). Interpersonal Justice refers to whether individuals are treated with dignity and respect (Colquitt et al.,2001). Mahfuz (2012), emphatically states that Informational Justice considers the completeness of processes and outcomes explanations (Colquitt et al.,2001). Akiomi Inoue et al., (2009), elucidates that informational justice focuses on supervisors' communications with employees, in particular explanations that convey information about why procedures were used in a certain way or why outcomes were distributed in a certain fashion (Greenberg In Cropanzano,1993).

RESEARCH GAPS

The researcher noticed that no study has addressed the impact of Organizational Justice dimensions in Industrial organizations. There is still an unaddressed issue of measuring cumulative influence of personal and organizational details of employees on the perception towards Organizational Justice.

OBJECTIVES OF THE STUDY

1. To analyse the various dimensions of Organizational Justice.
2. To measure the employees perception towards Organizational Justice.
3. To identify the factor determining the Organizational Justice.

METHODOLOGY

The study is based on the primary data obtained from the individuals working in Industrial Organisations. A well-structured questionnaire was formulated that consisted of optional type questions as well as statements in likerts 5-point scale regarding organizational justice. The range of 5-point scale varies from strongly agree to strongly disagree.

SAMPLING DESIGN

An attempt was made to obtain representation from diverse organizations. The researcher used convenience sampling method to collect the responses from 17 Industrial Organizations, both Public and Private were selected for the purpose of data collection. The researcher circulated 1090 questionnaires and obtained 714 responses without any flaws. Hence the sample size of the research is 714.

DATA ANALYSIS

The researcher subsequently used both univariate and multi-variate statistical techniques to anatomically analyse the data. Factor analysis and one way analysis of variance are subsequently used for data analysis.

ANALYSIS AND DISCUSSION

The researcher intended to analyse the impact of organizational justice dimensions in the industrial organizations. After reviewing the national and international literature regarding organizational justice the researcher generated 20 variables in likert's 5 point scale and incorporated the same in the research instrument. And Factor analysis by Principle Component Method is used to identify the predominant factors.

TABLE 1: TOTAL VARIANCE EXPLAINED

Rotation Sums of Squared Loadings		
Total	% of Variance	Cumulative %
4.113	20.564	20.564
3.304	16.518	37.082
3.120	15.602	52.684
2.835	14.173	66.857

Table 1 shows that the 20 variables are reduced into 4 predominant factors with cumulative variance of 66.857%. The predominant factors with the variable loadings can be derived from the rotated component matrix and they are named as Informational Justice, Interpersonal Justice, Procedural Justice and Distributive Justice.

FINDINGS AND CONCLUSION

The study clearly identified the factors determining organizational justice in an industrial organization. The factors identified were Informational Justice, Interpersonal Justice, Procedural Justice and Distributive Justice. These factors were found to be responsible for determining the organizational justice in industrial organizations. It was found that the employees from the industrial organizations strongly agreed to Informational Justice and Interpersonal Justice to be the factors of importance determining Organizational Justice. It is also understood that informational justice plays a major role in determining justice in industrial organizations. The organizational development is possible only when justice is present in the workplace. It is very important to note that any organization that gives importance to "fairness or justice" in dealing with others in the workplace will surely succeed.

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