EFFECT ON MUTUAL FUND INDUSTRY IN INDIA DUE TO SURGE IN STOCK MARKET PRICES FROM JANUARY- JUNE 2009

Suresh Chandra Bihari
Associate Professor (Finance), IBS, Hyderabad. Email: scbihari@gmail.com/scbihari@yahoo.co.in
M-9010620500/09437107358

Introduction:

The origin of mutual fund industry in India is with the introduction of the concept of mutual fund by UTI in the year 1963. Though the growth was slow, but it accelerated from the year 1987 when non-UTI players entered the industry. In the past decade, Indian mutual fund industry had seen a dramatic improvement, both qualities wise as well as quantity wise. The supervisory authority adopted a set of measures to create a transparent and competitive environment in mutual funds. Some of them were like relaxing investment restrictions into the market, introduction of open-ended funds, and paving the gateway for mutual funds to launch pension schemes. The measure was taken to make mutual funds the key instrument for long-term saving. The more the variety offered, the quantitative will be investors. However this research paper will focus on the growth in mutual fund industry in India since January 2009 due to the surge in stock market prices due to recovery in the Indian market.

Objectives:

The contagion of the subprime crisis spread to India through all the channels - the financial channel, the real channel, and importantly, as happens in all financial crises, the confidence channel. India's financial markets - equity markets, money markets, forex markets and credit markets - had all come under pressure from a number of directions. As a consequence of the global liquidity squeeze, Indian banks and corporate sector found their overseas financing drying up, forcing corporate to shift their credit demand to the domestic banking sector. Also, in their frantic search for substitute financing, corporate withdrew their investments from domestic money market mutual funds putting redemption pressure on the mutual funds and down the line on non-banking financial companies (NBFCs) where the MFs had invested a significant portion of their funds. Now the things are changing and the stock market is improving. Therefore the objective of the project is study the effect of rising stock prices on the mutual fund industry in India.

Methodology:

The methodology followed is:

Identification of needs: To identify the needs of project, we had prepared an approach paper which will act as a guideline for the steps to follow subsequently. Once the approach paper is made, the next task was to follow each and every point of the paper one after the other.

Collection of data: The major focus will be on secondary data for collecting information about mutual funds and the stock market in India. The sources for collecting information will be AMFIINDIA website, NSEINDIA, BSEINDIA website.

Analysis of impact on mutual funds due to surge in stock prices since January 2009: The next important task will be to study and interpret the reasons for increase in the stock prices, its relationship with mutual funds in India.

Limitation of the Study:

The performance of the mutual funds depends on the investment decision made by the fund manager in the company. Therefore the performance of the mutual funds varies from company to company depending upon the decision made by the fund manager.

Therefore it is very difficult to study and do the analysis of all the mutual fund companies in India because their performance is very subjective.

This topic is a current topic so it is difficult to any find any research work done on it.

Subscription based websites which provide quality data is not possible to access due to unavailability of funds.

Lack of prior experience and knowledge in the field.

Literature Review:

Empirical study on the conditional performance of the Indian mutual fund industry by Bijan Roy

This paper uses a technique called conditional performance evaluation on a sample of eighty-nine Indian mutual fund schemes .This paper measures the performance of various mutual funds with both

unconditional and conditional form of CAPM, Treynor- Mazuy model and Henriksson-Merton model. The effect of incorporating lagged information variables into the evaluation of mutual fund managers' performance is examined in the Indian context. The results suggest that the use of conditioning lagged information variables improves the performance of mutual fund schemes, causing alphas to shift towards right and reducing the number of negative timing coefficients.

Performance Evaluation of Indian Mutual Funds by DR S NARAYAN RAO

In this paper the performance evaluation of Indian mutual funds in a bear market is carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharp's ratio, Sharp's measure, Jensen's measure, and Fama's measure .The data used is monthly closing NAVs. The source of data is website of Association of Mutual Funds in India (AMFI). Study period is September 98-April 02(bear period). We started with a sample of 269 open ended schemes (out of total schemes of 433) for computing relative performance index. Then after excluding the funds whose returns are less than risk-free returns, 58 schemes were used for further analysis. Mean monthly (logarithmic) return and risk of the sample mutual fund schemes during the period were 0.59% and 7.10%, respectively, compared to similar statistics of 0.14% and 8.57% for market portfolio. The results of performance measures suggest that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

Mutual funds and stock and bond market stability by FRANKLIN R EDWARDS

In this research paper the unprecedented growth in mutual funds has raised question about the impact of mutual funds flow on stock and bond prices. Many believe that the equity bull market of the 1990's is attributable to the huge flows of funds into equity mutual funds during this period, and that a withdrawal of those funds could send stock prices plummeting. This paper investigates the relationship between aggregate monthly mutual funds flows and stock and bond monthly return during a 30- year period beginning January 1961 utilizing granger causality and instrumental variables analysis. With one exception, flows into stock and bond funds have not affected either stock and bond returns. The exception is 1971-81, when widespread redemption from equity mutual funds significantly depressed stock returns. In contrast, the magnitude of flows into both stock funds are significantly affected by stock and bond returns.

The Effect of Stock Prices on the Demand for Money Market Mutual Funds by James P. Dow, Jr. California State University, Northridge MAY 1998

According to this paper during the 1990s households have sharply increased the share of their portfolios held in equities and mutual funds and sharply reduced the share held in bank accounts. We show that this reallocation has substantially increased the impact of financial-market developments on the demand for money. Specifically, both increases and decreases in the Wilshire 5000 have boosted the demand for money funds during the 1990s, although they had little effect on money funds during the 1980s. The estimated effects in the 1990s are generally statistically significant and economically important.

Stock Returns and Aggregate Mutual Fund Flows: A System by Jae beom Kim (Department of Economics Oklahoma State University)

This paper investigate dynamic relations between stock returns and equity mutual fund flows at the macro level, we combine information from the stock market with information from bond and money markets in a system method. The empirical evidence from SURECM and Granger causality tests indicates that there seems to be a positive long-run relationship between stock returns and fund flows, and stock returns are likely to lead fund flows. Thus, investors tend to move their money to the securities that yield higher returns, and the most important element explaining equity mutual fund flows seems to be security performance in the US market.

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In analyzing the relations between stock returns and

mutual fund flows, there are two different approaches, a micro approach and a macro approach. The micro approach focuses attention on how mutual funds flows are analyzed on an individual basis. On the other hand, as shown by Warther (1995), the macro approach is different from the micro approach in that it focuses on large scale movements of money into and out of the market without regard to which fund it goes into or comes from. This paper has used macro approach.

Mutual Fund's Behavior on Stock Liquidity: Empirical Results from Chinese Security Market by Jianbing Huang* Wei Hu** Fudan University

This paper studies the relationship between fund investment and market liquidity by using Chinese security market data. The results show that, among several measures of market liquidity, the indexes based on volume, such as turnover and market depth, have a deeper impact on fund investment decision. Furthermore, the relationship between security liquidity and fund investment varies when market status is taken into account. On the other hand, fund investments have a negative effect on security liquidity measured by market width, while have a positive effect on other liquidity measures. The authors attribute the results to herding behavior of fund investment.

Relations between mutual fund flows and stock market returns in Korea: by Natalie Y. Oh and Jerry T. Parwada, October 2005

This paper analyses relations between stock market returns and mutual fund flows in Korea. A positive relationship exists between stock market returns and mutual fund flows, measured as stock purchases and sales and net trading volumes. In aggregate, mutual funds are negative feedback traders. Standard causality tests suggest that it is predominantly returns that drive flows, while stock sales may contain information about returns. After controlling for declining markets, the results suggest Korean equity fund managers tend to increase stock purchases in times of rising market volatility, possibly disregarding fundamental information, and to sell in times of wide dispersion in investor beliefs.

The price linkages between Malaysian unit trust funds and the stock market Short run and long run interrelationships: by Soo-Wah Low and Noor Azlan Ghazali School of Business Management, Faculty of Economics and Business, University Kebangsaan Malaysia, Selangor, Malaysia

The primary objective of the paper is to examine the short and long run price linkages between Malaysian unit trust funds and the stock market index as proxied by the Kuala Lumpur composite index (KLCI) over the period 1996-2000. Design/methodology/approach - Co-integration analyses are used to identify the long run relationship between unit trust funds and the stock market index while Granger causality tests are used to measure the short run price linkages. Findings - Co-integration results show that the long run pricing performance of the unit trust funds differs significantly from that of the KLCI. Interestingly, the findings also reveal that two index funds are found not to be co-integrated with the stock market index. In the short run, one-way Granger causality test shows that changes in the KLCI Granger causes changes in the unit trust funds. This suggests that fund managers are responding to the past changes in the stock market index over the short run.

Mutual funds:

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciations realized are shared by its unit holders in proportion to the number of units owned by them. Thus a Mutual Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. The flow chart below describes broadly the working of a mutual fund:

ADVANTAGES OF MUTUAL FUNDS:

Professional Management
Diversification
Convenient Administration
Return Potential
Low Costs
Liquidity
Transparency
Flexibility
Choice of schemes
Tax benefits
Well regulated

Participants in a mutual fund industry:

The various entities in the mutual fund industry are explained below:

Unit Holders / Investors: Unit Holders or investors are those who invest in Mutual Fund.

Sponsor: Sponsor is the person who acting alone or in combination with another body corporate establishes a mutual fund. Sponsor must contribute at least 40% of the net worth of the Investment

managed and meet the eligibility criteria prescribed under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996.The Sponsor is not responsible or liable for any loss or shortfall resulting from the operation of the Schemes beyond the initial contribution made by it towards setting up of the Mutual Fund.

Trust: The Mutual Fund is constituted as a trust in accordance with the provisions of the Indian Trusts Act, 1882 by the Sponsor. The trust deed is registered under the Indian Registration Act, 1908.

Trustee: Trustee is usually a company (corporate body) or a Board of Trustees (body of individuals). The main responsibility of the Trustee is to safeguard the interest of the unit holders and inter alia ensure that the AMC functions in the interest of investors and in accordance with the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996, the provisions of the Trust Deed and the Offer Documents of the respective Schemes. At least 2/ 3rd directors of the Trustee are independent directors who are not associated with the Sponsor in any manner.

Asset Management Company (AMC): The AMC is appointed by the Trustee as the Investment Manager of the Mutual Fund. The AMC is required to be approved by the Securities and Exchange Board of India (SEBI) to act as an asset management company of the Mutual Fund. At least 50% of the directors of the AMC are independent directors who are not associated with the Sponsor in any manner. The AMC must have a net worth of at least 10crores at all times.

Registrar and Transfer Agents: Mutual funds and their shareholders also rely on the services of third party called transfer agents, who maintains records of shareholder accounts calculate and disburse dividends and capital gains, and prepare and mail shareholder account statements, and other shareholder notices. Some transfer agents also prepare and mail statements confirming shareholder transactions and account balances, and maintain customer service departments to respond to shareholders enquiries.

Custodians: Mutual Funds are required by law to protect their portfolio securities by placing them with a custodian. Nearly all Mutual Funds use banks that comply with various regulatory requirements designed to protect the fund's assets and make them eligible to be a fund's custodian. SEBI requires any bank acting as a custodian to segregate mutual fund portfolio securities from other bank assets.

Investment Advisors / Fund Managers: Fund Managers are the person who manages the fund's assets in accordance with the fund's investment objectives and policies. They are generally people with ample knowledge and experience in the capital market. Through their expertise they try to invest the funds in securities which are able to generate good returns at the adequate risk level.

SEBI: The Stock Exchange Board of India (SEBI) is regulatory authority of the Mutual Funds.

TYPES OF MUTUAL FUND SCHEMES:

Wide variety of Mutual Fund Schemes exists to cater to the needs such as financial position, risk tolerance and return expectations etc. thus mutual funds has Variety of flavors, Being a collection of many stocks, an investors can go for picking a mutual fund might be easy. There are over hundreds of mutual funds scheme to choose from. It is easier to think of mutual funds in categories, mentioned below:

Open - Ended Schemes: An open-end fund is one that is available for subscription all through the year. These do not have a fixed maturity. Investors can conveniently buy and sell units at Net Asset Value ("NAV") related prices. The key feature of open-end schemes is liquidity.

Close - Ended Schemes: These schemes have a pre-specified maturity period. One can invest directly in the scheme at the time of the initial issue. Depending on the structure of the scheme there are two exit options available to an investor after the initial offer period closes. Investors can transact (buy or sell) the units of the scheme on the stock exchanges where they are listed. The market price at the stock exchanges could vary from the net asset value (NAV) of the scheme on account of demand and supply situation, expectations of unit holder and other market factors. Alternatively some close-ended schemes provide an additional option of selling the units directly to the Mutual Fund through periodic repurchase at the schemes NAV; however one cannot buy units and can only sell units during the liquidity window. SEBI Regulations ensure that at least one of the two exit routes is provided to the investor.

Interval Schemes: Interval Schemes are that scheme, which combines the features of open-ended and close-ended schemes. The units may be traded on the stock exchange or may be open for sale or redemption during pre-determined intervals at NAV related prices.

The risk return trade-off indicates that if investor is willing to take higher risk then correspondingly he can expect higher returns and vice versa if he pertains

to lower risk instruments, which would be satisfied by lower returns. For example, if an investors opt for bank FD, which provide moderate return with minimal risk. But as he moves ahead to invest in capital protected funds and the profit-bonds that give out more return which is slightly higher as compared to the bank deposits but the risk involved also increases in the same proportion.

Thus investors choose mutual funds as their primary means of investing, as Mutual funds provide professional management, diversification, convenience and liquidity. That doesn't mean mutual fund investments risk free. This is because the money that is pooled in are not invested only in debts funds which are less riskier but are also invested in the stock markets which involves a higher risk but can expect higher returns. Hedge fund involves a very high risk since it is mostly traded in the derivatives market which is considered very volatile.

Equity fund: These funds invest a maximum part of their corpus into equities holdings. The structure of the fund may vary different for different schemes and the fund manager's outlook on different stocks. The Equity Funds are sub-classified depending upon their investment objective, as follows:

Diversified Equity Funds

Mid-Cap Funds

Sector Specific Funds

Tax Savings Funds (ELSS)

Equity investments are meant for a longer time horizon, thus Equity funds rank high on the risk-return matrix.

Debt funds: The objective of these Funds is to invest in debt papers. Government authorities, private companies, banks and financial institutions are some of the major issuers of debt papers. By investing in debt instruments, these funds ensure low risk and provide stable income to the investors. Debt funds are further classified as:

Gilt Funds: Invest their corpus in securities issued by Government, popularly known as Government of India debt papers. These Funds carry zero Default risk but are associated with Interest Rate risk. These schemes are safer as they invest in papers backed by Government

Income Funds: Invest a major portion into various debt instruments such as bonds, corporate debentures and Government securities. The aim of these schemes is to provide regular and steady income to investors. These schemes generally invest in fixed income securities such as bonds and corporate debentures. Capital appreciation in such schemes may be limited.

MIPs: Invests maximum of their total corpus in debt instruments while they take minimum exposure in equities. It gets benefit of both equity and debt market. These scheme ranks slightly high on the risk-return matrix when compared with other debt schemes.

Short Term Plans (STPs): Meant for investment horizon for three to six months. These funds primarily invest in short term papers like Certificate of Deposits (CDs) and Commercial Papers (CPs). Some portion of the corpus is also invested in corporate debentures.

Liquid Funds: Also known as Money Market Schemes, These funds provides easy liquidity and preservation of capital. These schemes invest in short-term instruments like Treasury Bills, inter-bank call money market, CPs and CDs. These funds are meant for short-term cash management of corporate houses and are meant for an investment horizon of 1day to 3 months. These schemes rank low on risk-return matrix and are considered to be the safest amongst all categories of mutual funds.

Balanced funds: As the name suggest they, are a mix of both equity and debt funds. They invest in both equities and fixed income securities, which are in line with pre-defined investment objective of the scheme. These schemes aim to provide investors with the best of both the worlds. Equity part provides growth and the debt part provides stability in returns. Further the mutual funds can be broadly classified on the basis of investment parameter viz,

Each category of funds is backed by an investment philosophy, which is pre-defined in the objectives of the fund. The investor can align his own investment needs with the funds objective and invest accordingly.

Growth Schemes: Growth Schemes are also known as equity schemes. The aim of these schemes is to provide capital appreciation over medium to long term. These schemes normally invest a major part of their fund in equities and are willing to bear short-term decline in value for possible future appreciation.

Income Schemes: Income Schemes are also known as debt schemes. The aim of these schemes is to provide regular and steady income to investors. These schemes generally invest in fixed income securities such as bonds and corporate debentures. Capital appreciation in such schemes may be limited.

Balanced Schemes: Balanced Schemes aim to provide both growth and income by periodically distributing a part of the income and capital gains they earn. These schemes invest in both shares and fixed income securities, in the proportion indicated in their offer documents (normally 50:50).

Money Market Schemes: Money Market

Schemes aim to provide easy liquidity, preservation of capital and moderate income. These schemes generally invest in safer, short-term instruments, such as treasury bills, certificates of deposit, commercial paper and inter-bank call money.

Tax Saving Schemes: Tax-saving schemes offer tax rebates to the investors under tax laws prescribed from time to time. Under Sec.88 of the Income Tax Act, contributions made to any Equity Linked Savings Scheme (ELSS) are eligible for rebate.

Index Schemes: Index schemes attempt to replicate the performance of a particular index such as the BSE SENSEX or the NSE 50. The portfolio of these schemes will consist of only those stocks that constitute the index. The percentage of each stock to the total holding will be identical to the stocks index weight age. And hence, the returns from such schemes would be more or less equivalent to those of the Index.

Effect OF ECONOMIC DOWNTURN on INDIAN Economy:

When the financial crisis erupted in a comprehensive manner on Wall Street, there was some premature thinking among Indian policymakers and media persons. It was argued that India would be relatively immune to this crisis, because of the "strong fundamentals" of the economy and the supposedly well-regulated banking system. This argument was emphasized by the Finance Minister and others even when other developing countries in Asia clearly experienced significant negative impact, through transmission of stock market turbulence and domestic credit stringency.

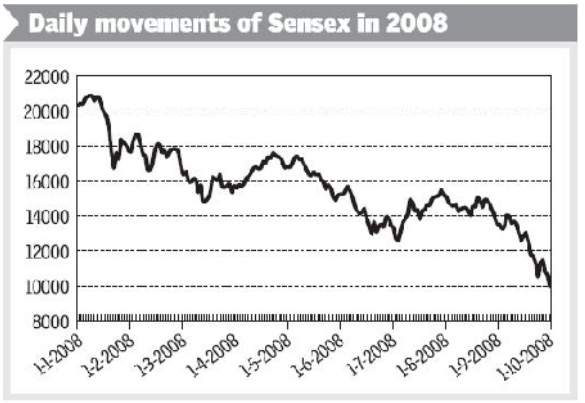
These effects have been most marked among those developing countries where the foreign ownership of banks is already well advanced, and when US-style financial sectors with the merging of banking and investment functions have been created. If India is not in the same position, it is not to the credit of our policymakers, who had in fact wanted to go along the same route. Indeed, for some time now there have been complaints that these "necessary" reforms which would "modernize" the financial sector have been held up because of opposition from the Left parties.

But even though we are slightly better protected from financial meltdown, largely because of the still large role of the nationalized banks and other controls on domestic finance, there is certainly little room for complacency.

Economic downturn

After a long spell of growth, the Indian economy is experiencing a downturn. Industrial growth is faltering, inflation remains at double-digit levels, the current account deficit is widening, foreign exchange reserves are depleting and the rupee is depreciating. The last two features can also be directly related to the current international crisis. The most immediate effect of that crisis on India has been an outflow of foreign institutional investment from the equity market. Foreign institutional investors, who need to retrench assets in order to cover losses in their home countries and are seeking havens of safety in an uncertain environment, have become major sellers in Indian markets.

In 2007-08, net FII inflows into India amounted to $20.3 billion. As compared with this, they pulled out $11.1 billion during the first nine-and-a-half months of calendar year 2008, of which $8.3 billion occurred over the first six-and-a-half months of financial year 2008-09 (April 1 to October 16). This has had two effects: in the stock market and in the currency market.



Given the importance of FII investment in driving Indian stock markets and the fact that cumulative investments by FIIs stood at $66.5 billion at the beginning of this calendar year, the pullout triggered a collapse in stock prices. As a result, the Sensex fell from its closing peak of 20,873 on January 8, 2008, to less than 10,000 by October 17, 2008.

Effect on mutual fund industry in INDIA:

It was a challenging year that the Fund Industry passed through in fiscal 2008-09. The Industry till May 2008 was growing at the annual growth rate of about 50 percent per annum. Since then, there was a marked deceleration in the growth of Assets under Management till September 2008. Thereafter, reflecting the financial 'Tsunami' which erupted elsewhere but impacted our economy also to some extent, the AUM started declining over the year and

though it recovered somewhat in the last quarter, the month end AUM for March 2009 was over 17 percent lower than the previous year. The industry witnessed for the first time since 2000, a net outflow of funds for the year 2008-09.

The effect of fall in stock market on mutual funds industry in India can be studied by analyzing the following factors like:

Average Assets under management

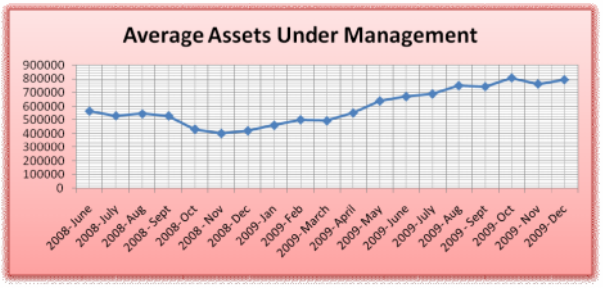
Redemption during the period

Number of new schemes launched

Sales during the period

Average Assets under management: Assets under management (AUM) refers to the total market value of investments managed by a mutual fund, money management firm, hedge fund, portfolio manager, or other financial services company. AUM generally changes according to the flow of money into and out of a particular fund or company. It also fluctuates based on changes in the value of a fund or company's underlying investments.

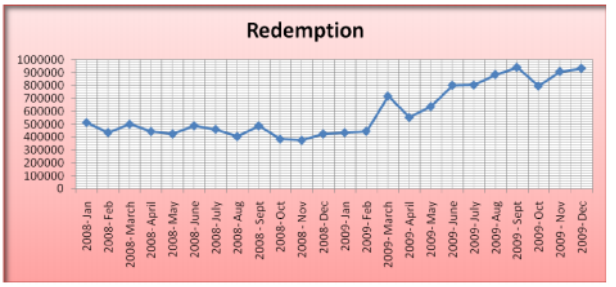
Trend line showing Average AUM from June 2008-December 2009



Analysis of the above chart: We can see that AUM for the Mutual funds Industry in India started falling from September 2008 and continued but in 2009 when economy started recovering; the stock market also went up then the AUM also saw an uptrend, a growth in AUM was visible. Therefore we can say that downturn in the economy had an effect on the equity market and mutual fund industry due to which both of them went down but when then economy started recovering so did the equity market and AUM also. To study whether rise in equity market had an effect on the mutual funds AUM, we did the SPSS study on the data collected to find if there is any correlation among them.

Redemption during the period:

Trend showing the redemption

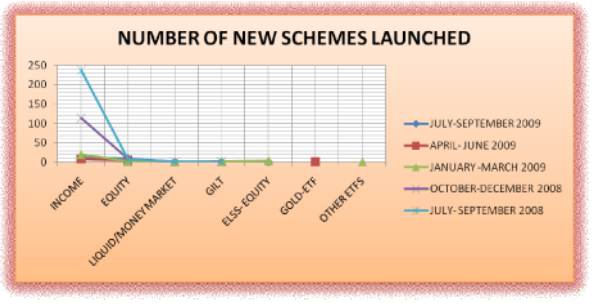


Analysis of the graph: The redemption during recession period had reduced because very few new schemes were launched the period, equity market was going down, retail investors were not ready to invest in fact they were withdrawing their investment, FIIs too were drawing back their investment as a results the investment were on the down turn which impacted the mutual fund industry. But as the market started recovering and the number of redemptions also increased and it can be seen from the graph.

Number of new schemes launched: When the people are not ready to invest, FIIs are withdrawing their money, Banks and corporate are also withdrawing their money then it is obvious that the number of new schemes that are launched every month to attract the customer will be limited. This was had happened during the recession period but as the economy started recovering the number of new schemes launched also started increasing. The numbers of new schemes launched were maximum in monthly income plan. Monthly income plan are the schemes which are launched every month with attractive offers.

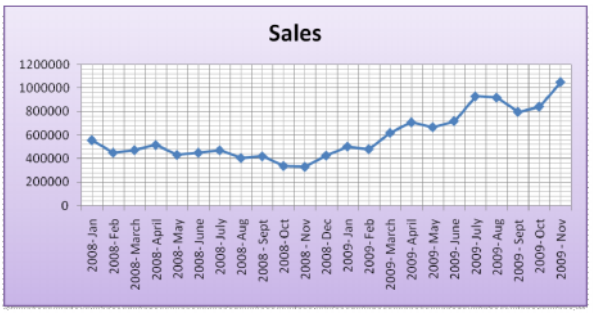
Table showing number of new schemes launched in different categories

NO OF NEW SCHEMES LAUNCHED	APRIL-JUNE 2009	JANUARY-MARCH 2009	OCTOBER-DECEMBER 2008	JULY-SEPTEMBER 2008
INCOME	9	20	114	238
EQUITY	4	2	8	7
LIQUID/MONEY MARKET	-	1	1	2
GILT	-	2	2	1
ELSS- EQUITY	-	4	-	-
GOLD-ETF	1	-	-	-
OTHER ETFS	-	1	-	-
TOTAL	14	30	125	248



Graph showing the trend of number of new schemes launched in various categories in each quarter

Sales in Mutual fund Industry:



Analysis:

In this graph also we can see that from January 2009 there has been increase in the sales of different mutual funds products and policies because the economy started recovering due to which equity market improved and investor confidence in the Indian market once again came back which lead to increase in the sales of the mutual fund industry in India. This can be further confirmed by the increase in number of mutual fund schemes sold.

Quantitative analysis:

Regression analysis is a Statistical Forecasting model that is concerned with describing and evaluating the relationship between a given variable (usually called the dependent variable) and one or more other variables (usually known as the independent variables. Regression analysis models are used to help us predict the value of one variable from one or more other variables whose values can be predetermined. The first stage of the process is to identify the variable we want to predict (the dependent variable) and to then carry out multiple regression analysis focusing on the variables we want to use as predictors (explanatory variables). The multiple regression analysis would then identify the relationship between the dependent variable and the explanatory variables - this is then finally presented as a model (formula). Regression analysis has been done using SPSS.

In the regression analysis the dependent variable is: Nifty

Independent variables are:

Average Assets under management

Redemption during the period

Number of new schemes launched

Sales during the period

Key statistics related to linear regression analysis:

Coefficient of determination: It is the proportion of variability in a data set that is accounted for by the statistical model. It provides a measure of how well future outcomes are likely to be predicted by the model. R2 is a statistic that will give some information about the goodness of fit of a model. In regression, the R2 coefficient of determination is a statistical measure of how well the regression line approximates the real data points. An R2 of 1.0 indicates that the regression line perfectly fits the data, or it should be closer to 1.

Significance level: The significance level is usually denoted by the Greek symbol, a (alpha). Popular levels of significance are 5% (0.05), 1% (0.01) and 0.1% (0.001). For example, if someone argues that "there's only one chance in a thousand this could have happened by coincidence," a 0.001 level of statistical significance is being implied. The lower the significance level, the stronger the evidence required. Choosing level of significance is an arbitrary task, but for many applications, a level of 5% is chosen, for no better reason than that it is conventional.

The Analysis of Variance table is also known as the ANOVA table (for ANALYSIS Of VARIANCE). It tells the story of how the regression equation accounts for variability in the response variable.

Here we have done regression analysis using SPSS for two sets of data. One set of data is for 2years from January 2008- December 2009. Another set is for 6 months, which is the time period for my study.

Case A: when Data used is for 2years

TABLE 1: Descriptive Statistics

Factors	Mean	Std. Deviation	N
NSE	4202.57	901.39	24
AUM	589015.29	118891.755	24
REDEMPTION	593188.46	197448.376	24
SCHEMES	33.83	31.636	24
SALES	595589.42	202996.738	24

Analysis: This table explains the various factors which I have used and it also shows their respective mean and standard deviation. Since the data is for two years so N here is 24.

Table 2: Correlations

Correlations						
		NSE	AUM	REDEMPTION	SCHEMES	SALES
Pearson Correlation	NSE	1	0.677	0.359	0.157	0.348
	AUM	0.677	1	0.868	-0.397	0.852
	REDEMPTION	0.359	0.868	1	-0.538	0.919
	SCHEMES	0.157	-0.397	-0.538	1	-0.628
	SALES	0.348	0.852	0.919	-0.628	1
Sig. (1-tailed)	NSE	.	0.00014	0.04254	0.232	0.0478
	AUM	0.00014	.	1.93E-08	0.0274	6.48E-08
	REDEMPTION	0.04254	1.93E-08	.	0.00337	1.12E-10
	SCHEMES	0.23187	0.0274	0.00337	.	0.000511
	SALES	0.04783	6.48E-08	1.12E-10	0.000511	.
N	NSE	24	24	24	24	24
	AUM	24	24	24	24	24
	REDEMPTION	24	24	24	24	24
	SCHEMES	24	24	24	24	24
	SALES	24	24	24	24	24

Analysis : this table explains the correlation between all the factors like AUM have is highly correlated with Sales. It means that if AUM increases than Sales will also increase 85% of the time in the same direction. Generally the correlation lies between -1 to +1. We can see from the table that AUM is highly correlated with SALES, REDEMPTION, NSE but it is negatively correlated with number of new schemes launched.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.677(a)	.458	.433	678.604	.458	18.581	1	22	.000	
2	.820(b)	.673	.642	539.553	.215	13.801	1	21	.001	
3	.871(c)	.758	.722	475.531	.085	7.035	1	20	.015	.950

A Predictors: (Constant), AUM
B Predictors: (Constant), AUM, SCHEMES
C Predictors: (Constant), AUM, SCHEMES, REDEMPTION
D Dependent Variable: NSE

Analysis: in this table we can see that model one has only variable that is AUM and independent variable NSE, and their correlation and coefficient of determination (R square) is calculated. R square means what percentage of the independent variable is explained by the dependent variable that in this case 45.8% of the AUM is explained by the NSE. But when second factor is also taken in to the consideration then R square value increases, this happen because of the correlation between the two factors. This table also tells us about the significant level and significant level should generally be less than 5%. We can see that the significance level is less than 5%, therefore my model is appropriate.

Table 4: ANOVA

ANOVA(d)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8556843.171	1	8556843.171	18.58149	0.000283
	Residual	10131076.69	22	460503.486		
	Total	18687919.86	23			
2	Regression	12574439.21	2	6287219.606	21.5968	8.03E-06
	Residual	6113480.65	21	291118.1262		
	Total	18687919.86	23			
3	Regression	14165306.68	3	4721768.894	20.88071	2.25E-06
	Residual	4522613.181	20	226130.659		
	Total	18687919.86	23			

A. Predictors: (constant), AUM
B. Predictors: (constant), AUM, SCHEMES
C. Predictors: (constant), AUM, SCHEMES, REDEMPTION
D. Dependent variable: NSE

Analysis: The Analysis of Variance table is also known as the ANOVA table (for Analysis Of Variance). It tells the story of how the regression equation accounts for variability in the response variable. The column labeled Source has three rows: Regression, Residual, and Total. The column labeled Sum of Squares describes the variability in the response variable, Y. The total amount of variability in the response is the Total Sum of Squares, . (The row labeled Total is sometimes labeled Corrected Total, where corrected refers to subtracting the sample mean before squaring and summing.) If a prediction had to be made without any other information, the best that could be done, in a certain sense, is to predict every value to be equal to the sample mean. The error--that is, the amount of variation in the data that can't be accounted for by this simple method--is given by the Total Sum of Squares.

Generally the ANOVA table is used for verifying the significance level and to judge whether our model is appropriate or not.

Case b: DATA used is for 6 months (January- June 2009)

Table 5: Descriptive Statistics

	Mean	Std. Deviation	N
NSE	3371.667	689.1304	6
AUM	476357.67	64494.291	6
REDEMPTION	599591.83	147348.958	6
SCHEMES	7.67	7.118	6
SALES	616655.50	102531.268	6

Here the only difference between the earlier table and this table is the time period because of that every value has changed in this table.

Table 6: Correlation

Correlations						
		NSE	AUM	REDEMPTION	SCHEMES	SALES
Pearson Correlation	NSE	1	0.859132	0.66992275	-0.28182	0.762756
	AUM	0.859132	1	0.54848687	-0.23463	0.905448
	REDEMPTION	0.669923	0.548487	1	0.49718	0.766615
	SCHEMES	-0.28182	-0.23463	0.49718026	1	0.104277
	SALES	0.762756	0.905448	0.76661549	0.104277	1
Sig. (1-tailed)	NSE	.	0.014184	0.07272268	0.294232	0.038875
	AUM	0.014184	.	0.12988625	0.327259	0.006494
	REDEMPTION	0.072723	0.129886	.	0.157839	0.037673
	SCHEMES	0.294232	0.327259	0.15783908	.	0.422076
	SALES	0.038875	0.006494	0.03767323	0.422076	.
N	NSE	6	6	6	6	6
	AUM	6	6	6	6	6
	REDEMPTION	6	6	6	6	6
	SCHEMES	6	6	6	6	6
	SALES	6	6	6	6	6

Analysis: this table also shows that correlation between all the factors has improved. This shows that during my period of study equity market has impacted the mutual funds in India. This can easily be noticed if we compare the correlation in this table with the previous correlation table.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.859(a)	.738	.673	394.29175	.738	11.273	1	4	.028	1.291

A PREDICTORS: (CONSTANT), AUM
B DEPENDENT VARIABLE: NSE

Table 8: ANOVA

ANOVA(b)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1752640.039	1	1752640.039	11.27346	0.028368
	Residual	621863.9619	4	155465.9905		
	Total	2374504.001	5			

PREDICTORS: (CONSTANT), AUM
DEPENDENT VARIABLE: NSE

This table again shows that significance level is less than 5% and my model is appropriate.

Overall Analysis and conclusion :

The SPSS results show that when the data was used for a period of 2years the correlation between all the factors was not so high compared to the correlation when the data was used for a period of 6 months.

It further showed that R square which explains the percentage of independent variable which is explained by the dependent variable has also increased. This means that surge in stock market has definitely affected the mutual fund industry in India.

It can also be said that initial thrust, boost has to come from the equity market and from there on it will depend upon the skills on the mutual funds managers and on various other factors.

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