

## MUTUAL FUNDS IN INDIA—EMERGING TRENDS

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### ABSTRACT

*This paper analyses the contribution of recent strategies adopted by the Mutual Funds (MFs) in India, which has led to their phenomenal growth. In order to widen and deepen their asset base, the MF industry has over the years seen the inception of a number of innovative schemes. Besides the product innovations, which cater to the needs of investors with different risk-return appetite, innovative marketing and distribution methodologies have been used to increase awareness & popularity of MF products. The MF schemes in the US are significantly higher than that in India, indicating the tremendous scope of growth of India's MF in the years to come. The econometric tools deployed in this paper confirm the significant role that innovations have played in the growth of the MF industry in India and their important role in the Indian stock market.*

**Keywords:** *Innovation, Mutual Fund (MF), Assets under Management (AUM), correlation*

### INTRODUCTION

Peter Drucker defines innovation as change that creates a new dimension of performance.

Tufano, (2003) in his study says financial innovation—like innovation elsewhere in business—is an ongoing process whereby private parties experiment to try to differentiate their products & services, responding to both sudden & gradual changes in the economy. Broadly speaking, financial innovation is the act of creating & then popularizing new financial instruments as well as new financial technologies, institutions & markets. The “innovations” are sometimes divided into product or process innovation, with product innovations exemplified by new derivative contracts, new corporate securities or new forms of pooled investment products, and process improvements typified by new means of distributing securities, processing transactions, or pricing transactions.

Govindarajan and Trimble (2006) focus strictly on strategic innovation, which differs sharply from three other categories of innovation.

The defining characteristics of the different types of innovations can be depicted in the following diagram.

The above figure depicts that fact that the four types of innovation require different managerial approaches, because they differ along three important dimensions: the expense of a single experiment, the time frame over which results become apparent, and the ambiguity of results.

Fig. 1: Different Types of Innovations

Innovation type	Expense of single experiment	Length of each experiment	Ambiguity of results
Continuous process improvement	Smallest	Shortest (could be days)	Clearest
Process revolution	↓	↓	↓
Product/service innovation			
Strategic innovation	Largest	Longest (could be years)	Most ambiguous

Source: www.hbs.edu

White J. L. (1997) in his study analyses four major underlying causes of the recent technological changes in financial services. First, data processing and telecommunications have become both more powerful and inexpensive, allowing improved data collection, risk assessment and wider geographical reach for products. Second, less restrictive and protectionist laws and regulations have paved the way for greater competition and allowed outside innovators to enter the financial services market.

The services sector contributes approximately 58% of India's GDP. The financial services industry has grown phenomenally and has become a dominant part of the services sector. This significant growth can be attributed to many innovations in this sector.

The financial services comprise Housing Finance, Venture Capital, Banking, Non-Banking Finance Companies, Mutual Funds (MF) etc. For the purpose of the study the analysis is confined to the innovative strategies adopted by MFs in India, which is one of the most important components of the financial services sector.

Fischer & Jordon (1995) mention, "Mutual funds represent one of the most potent institutional forces in the market." They also state "The mutual fund industry has exploded. Investors became attracted to the market and mutual funds, because they represented a sensible, efficient vehicle for individual investors to participate in the market."

According to Association of Mutual Funds of India (AMFI), a Mutual Fund (MF) is a trust that pools the savings of a number of investors who share a common financial goal. It is basically an avenue for pooling of resources of small investors for deployment both in primary & secondary markets.

This paper analyses the contribution of innovative strategies adapted by the Mutual Funds in India, which has led to their rapid growth. The study has been done with a global perspective and particular focus on the US MF industry, which is the largest in the world with an AUM of US\$ 9.329 trillion in June 2006, according to the Investment Company Institute.

The plan of this paper is as follows:

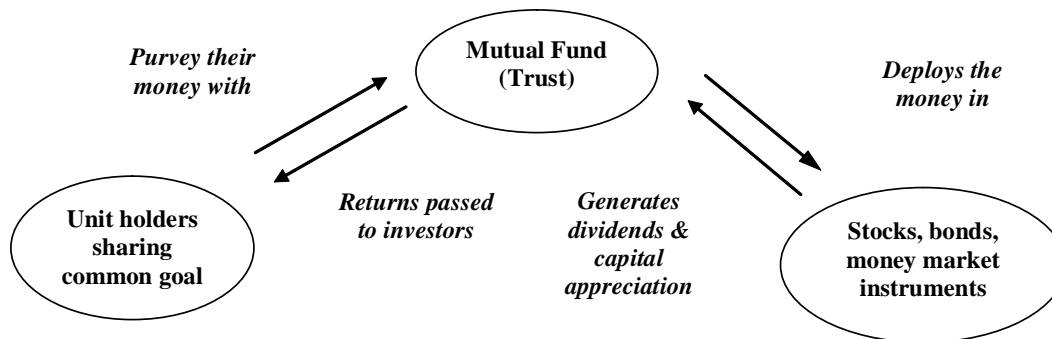
In Section II, a brief history of the mutual funds in India, with their growth during the different phases is presented. Section III discusses the classification of the schemes into traditional and innovative, with a global perspective. In Section IV, the innovations in marketing

and distribution are covered. In Section V, the impact of the innovations in the context of Indian mutual funds is discussed using econometric tools. Section VI presents the conclusions.

## BACKGROUND OF MFS IN INDIA

The figure below describes broadly the working of a mutual fund.

Fig. 2: Working of a Mutual Fund



Modern finance places great emphasis on the concept of return & risk. Every investor has a different appetite of risk & he likes to maximize returns based on his risk taking abilities. The investor behaviour has also changed over the years. They are moving away from real estate to financial assets & particularly to MFs.

The scope of the study traces the growth of MFs in India right from inception up to February 2007 with a global perspective.

The MF industry in India has witnessed a phenomenal increase with the Assets Under Management (AUM) at Rs 3,53,310 crores (US\$ 76.81 B) in February 2007 growing at a compounded annual growth rate (CAGR) of 30.5% during the last 4 years. It started in 1963 in India with the formation of Unit Trust of India by an act of the Indian Parliament.

Figure 3 indicates the growth of AUM in the Indian MF industry over the years.

Growth of the mutual funds is discussed in the 4 different phases—

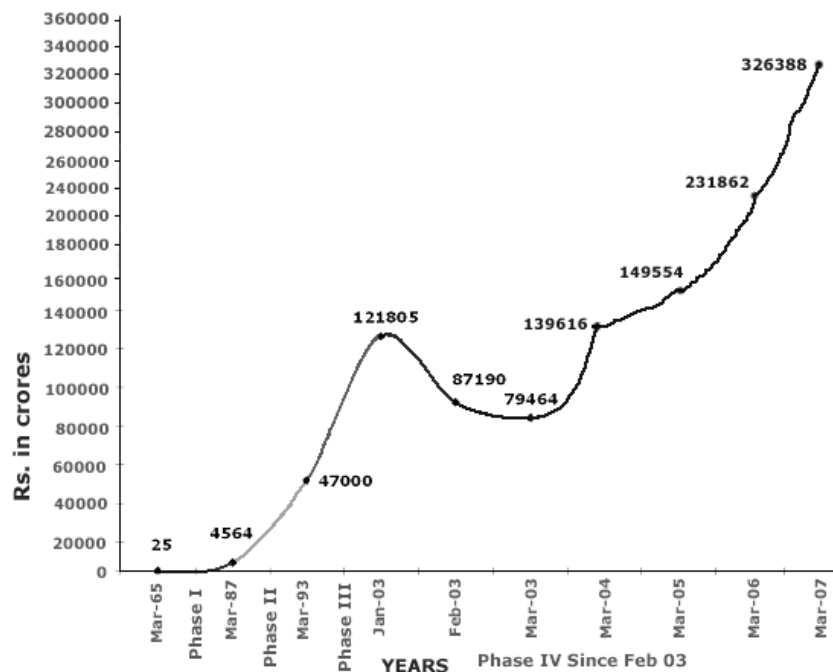
First Phase—1964-87—UTI all the way

Unit Trust of India (UTI) started its operations in 1964 by launching its first scheme. It still continues to be one of the largest players in the domestic MF industry with an AUM of Rs 38,603crores (US\$ 8.39 B) as on 28<sup>th</sup> February 2007.

Second Phase—1987-1993-Entry of Public Sector Funds

1987 marked the entry of non- UTI, public sector MFs set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI MF was the first non- UTI MF established in June 1987 followed by several other public sector banks and insurance corporations. At the end of this phase, the MF industry had AUM of Rs. 47,000 crores (US\$ 10.22 B).

Fig. 3: Growth in Assets under Management



Source: www.amfiindia.com

#### Third Phase–1993–2003 - Entry of Private Sector Funds

This phase marked the entry of private sector funds and signaled the intensification of competition. Both domestic and foreign players entered the market, offering a wide variety of schemes to investors. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector MF registered in July 1993. The opening up of the market to private players saw international players like Morgan Stanley, Jardine Fleming, and JP Morgan entering the market. By the end of this phase, there were 33 MFs with total AUM of Rs 1,21,805 crores (US\$ 26.48 B).

#### Fourth Phase–since February 2003–UTI's restructuring and beyond

In February 2003, following the repeal of the UTI Act 1963, UTI was bifurcated into two separate entities:

- (i) Specified Undertaking of the UTI, under the Government of India had AUM of Rs. 29, 835 crores (US\$6.49 B) as at the end of January 2003, representing broadly, the assets of US 64 scheme, assured return and certain other schemes.
- (ii) UTI MF Ltd, sponsored by State Bank of India (SBI), Punjab National Bank (PNB), Bank of Baroda (BOB) and Life Insurance Corporation of India (LIC).

With the bifurcation of the erstwhile UTI and with recent mergers taking place among different private sector funds, the MF industry has entered its current phase of consolidation and growth.

**Table 1**  
**Growth of MFS**

<i>Phases</i>	<i>CAGR of AUM</i>
First Phase–1964-87	25.40%
Second Phase–1987-1993	47.50%
Third Phase–1993-2003	9.99%
Fourth Phase–(till Feb’ 2007)	30.5%

If the growth is studied from 1993, the beginning of the third phase, it is found that the AUM of Rs 47,000 crores (US\$ 10.22 B) in 1993 had grown to Rs 3,53,310 crores (US\$ 76.81 B) in February 2007 that is, at a compounded annual growth rate (CAGR) of 15.4%. It may be noticed here from Table 1 that though the 3rd phase had been a relatively low growth period, the growth in the MF industry picked up in the 4th phase and that the CAGR had accelerated to 30.5% for the 4 years since February 2003.

### **CLASSIFICATION OF SCHEMES**

A MF can also be classified into various schemes considering their investment objective. For the purpose of the paper these schemes are further classified into traditional and innovative schemes. The traditional schemes are as given below:

#### **Growth / Equity Oriented Scheme**

The aim of Growth Funds is to provide capital appreciation over the medium to long-term. Such schemes normally invest a major part of their corpus in equities. Such funds have comparatively high risks. These schemes provide different options to the investors like dividend option, capital appreciation, etc. and the investors may choose an option depending on their preferences. The investors must indicate the option in the application form. The mutual funds also allow the investors to change the options at a later date.

Growth schemes are good for investors having a long-term outlook seeking appreciation over a period of time.

#### **Income / Debt Oriented Scheme**

The aim of Income Funds is to provide regular and steady income to investors. Such schemes generally invest in fixed income securities such as bonds, corporate debentures, government securities and money market instruments. Such funds are less risky compared to equity schemes. These funds are not affected because of fluctuations in equity markets. However, opportunities of capital appreciation are also limited in such funds. The NAVs of such funds are affected because of change in interest rates in the country.

If the interest rates fall, NAVs of such funds are likely to increase in the short run and vice versa. However, long-term investors may not bother about these fluctuations.

#### **Balanced Fund**

The aim of balanced funds is to provide both growth and regular income as such schemes invest both in equities and fixed income securities in the proportion indicated in their offer documents.

These are appropriate for investors looking for moderate growth. They generally invest 40-60% in equity and debt instruments. These funds are also affected because of fluctuations in share prices in the stock markets. However, NAVs of such funds are likely to be less volatile compared to pure equity funds.

In order to widen and deepen their asset base, the MF industry has over the years seen the transformation and inception of a number of innovative schemes like Money Market Mutual Fund ( MMMF), Gilt Fund, Index Funds, Contra Fund, Exchange Traded Funds (ETF), Fund of Funds (FOF), Capital Guaranteed Funds, Multi Manager Fund, Gold Traded Funds, etc.

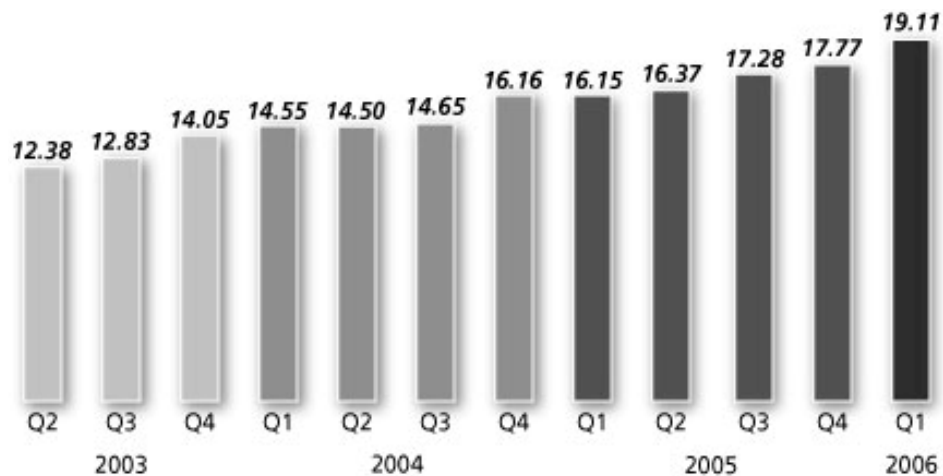
Before the innovative schemes that have been introduced in India are discussed, the growth and pattern of MFs in a global perspective with particular focus on the US market is studied, as it is the single largest MF industry in the world.

### MF Industry in a Global Perspective

Covrig, Lau and Ng (May 2006) mention the phenomenal growth of the mutual fund assets worldwide, which rose to \$12.83 trillion at the end of the third quarter of 2003, an increase of about 38% from 1998.

Going further, the mutual fund assets worldwide are now examined till the end of the 1st quarter of 2006. Figure 4 shows the trend in the worldwide mutual fund assets since 2003. Mutual fund assets worldwide have grown phenomenally and stood at \$19.11 trillion at the end of the first quarter of 2006.

Figure 4: Worldwide Mutual Fund Assets (Trillions of U.S. Dollars, end of Quarter)



The USA mutual fund industry has grown to be the largest in the world with AUM of \$9.329 trillion in June 2006, according to the Investment Company Institute. There are over 10,000 mutual fund schemes in the U.S.

Dow Jr. and Elmendorf (1998) in their study noted that 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. They showed 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.

Strong economic growth in the United States during much of the past quarter century has provided the underpinning for the growth in household demand for discretionary financial assets in general, and mutual funds in particular.

Poterba and Samwick (1996) in their study found that the market value of corporate stock in the United States increased by nearly one trillion dollars between December 1994 and July 1995 and hence the gains from the stock price rise. However, the growth of MFs is not an unmixed blessing. Marcis, West and Chambers (July 1995) in their paper mention that with the rapid growth in mutual funds in the 1990s, economist Henry Kaufman has expressed the concern that mutual funds may now pose a systemic risk to financial markets. They fear that a large and sudden drop in stock or bond prices could cause massive redemptions of mutual fund shares that would force portfolio managers to dump securities, thereby sending securities prices well below their fundamental values.

Khorana, Servaes and Tufano (2005) say that the mutual fund industry is the most successful recent financial innovation. They studied the mutual fund industry in 56 countries and examine where this financial innovation has flourished. The fund industry is larger in countries with stronger rules, laws, and regulations, and specifically where mutual fund investors' rights are better protected. They said that they might expect that more economically well-off and sophisticated national populations would be quicker to adopt the innovation in place of the older, more opaque methods of investing.

At the end of 2001, the worldwide mutual fund industry held \$11.7 trillion in assets. Median assets under management (AUM) as a function of the country's GDP are 9% with a high of 391% for Luxembourg, followed by Ireland with 186% and a low of 0.011% for Bangladesh (after excluding the countries with zero mutual fund assets) These assets were held in 55,160 funds, with a median number of 285 funds per country. The U.S., which had the largest fund industry in terms of the share of assets held, was also the largest in terms of the number of available mutual funds (8307 funds at the end of 2001). France & Korea were second & third with 7144 and 7117 funds, respectively. It is intriguing to note that there were over 55,000 different "products" available—a staggering number compared to almost any other industry.

Over the years the MF industry in India has seen the transformation through the inception of a number of innovative schemes like the following:

### **Money Market Mutual Fund ( MMMF)/Liquid Funds**

MMMFs owe their origin to regulations of banks. In the US, Section 11 of the Glass Steagal Act of 1933 prohibited payment of interest on checking deposits (current accounts); a ceiling was imposed on interest rates payable on time (fixed) deposits [Kohn 1996]. In India, RBI outlined the broad framework for setting up MMMF in its credit policy in April 1991. The objective was "providing an additional short-term avenue to investors and to bring money market instruments within the reach of individuals"

These funds are Income Funds and their aim is to provide easy liquidity, preservation of capital and moderate income. These schemes invest exclusively in safer short-term instruments such as treasury bills, certificates of deposit, commercial paper and inter-bank call money, etc.

Money market yields are higher than the interest rate offered on savings bank accounts. However notwithstanding the low rate of interest, savings bank account deposits continue to grow & amounted to Rs 3,02,303 crore (US\$ 65.71B) in March 2003, as compared to just Rs 13,734 crore (US\$ 2.98 B) for MMMFs. In perfect markets, one would expect investors to withdraw their funds from saving bank accounts and invest it in money markets, through MMMFs. But this has not happened.

Roy (2005) in his paper says that technology savvy banks have blurred the distinction between savings account and current accounts on one hand and term deposits on the other. They provide automatic switch from the former to the latter, which gives higher yield. When depositors earn returns applicable to term deposits on their savings / current accounts, the incentive to invest in MMMFs for short term, to earn higher returns, is diminished. These developments tend to reduce the unique selling proposition of MMMFs.

UTI Money Market Mutual Fund was the 1<sup>st</sup> MMMF to be launched in April 1997. The total AUM is Rs 1,22,258 crores (US\$ 26.58 B) as of February 2007 and represents a dominant 34.6% share of the total AUM in India.

### **Index Funds**

In the last 5 years, as many actively managed funds have lagged their benchmarks both because of higher fees and comparatively weak management, index funds have gained in popularity. The sound performance of the S&P 500 has given rise to funds whose objective is to mimic the returns of major indexes. These funds have attracted much attention and therefore asset inflows. The S&P 500 is just one of the many indexes that can be purchased as a mutual fund. The Wilshire 5000 index, a proxy for the total stock market (small, medium and large stocks) is popular due to its broad representation of the stock market (versus the S&P 500's focus on large stocks). Index funds can track small-cap stocks, bonds, or specific industry sectors. Index Funds in India replicate the portfolio of a particular index such as the BSE Sensitive index, S&P NSE 50 index (Nifty, which is taken as the proxy of the Indian stock market), etc. IDBI Index Fund launched the first index fund in India in 1999.

### **Gilt Fund**

These funds invest exclusively in government securities and have no default risk. The gilt funds provide to the investors the safety of investments made in government securities and better returns than direct investments in these securities through investing in a variety of government securities yielding varying rate of returns. Kotak Mutual Fund was the 1<sup>st</sup> mutual fund to launch Gilt Plan in December 1998. This is yet to gain too much popularity with the total AUM as on February 2007 at Rs 1968 crores (US\$ 0.43 B) only.

### **Exchange Traded Funds (ETF)**

ETFs have been a great innovation and have made a significant impact in the USA market. It is a security that tracks an index, a commodity or a basket of assets like an index fund, but



trades like a stock on an exchange, thus experiencing price changes throughout the day as it is bought and sold. . By owning an ETF, one gets the diversification of an index fund as well as the ability to sell short, buy on margin and purchase as little as one share. The Nifty BeES launched by Benchmark MF in January 2002 was the 1st ETF to be traded, in India.

### **Gold ETFs**

Gold ETFs have been a great success in countries like the US, the UK and Switzerland and it is estimated that the size of the Gold ETF market in India would grow significantly. But in a country like India, where gold is acquired in the form of jewellery and is passed on from generation to generation, the success of Gold ETFs will depend on the innovative strategies of the MFs to ensure that the yellow metal succeeds in warehouses rather than ending up in jewelry boxes.

The Gold ETF is a new concept, an instrument that enables one to buy and sell gold in demat form. The gold is held by a mutual fund house which offers investors gold in units for as little as Rs 100. The fund houses invest the money collected from investors in standard gold bullion and issue 'gold receipts'. Currently, there are two mutual funds, which offer Gold ETFs in India.

Benchmark Mutual Fund launched India's first gold Exchange-Traded Fund (ETF) on February 15, 2007 and listed as Gold BeES on NSE this year. Benchmark was soon followed by UTI Mutual Fund's gold scheme on March 1, which will list on the NSE in April 2007. Eight others have also firmed up plans to follow suit.

However, what could prove to be a dampener in the success of this new concept in India is the need to hold demat accounts to buy Gold ETFs. Especially considering the fact that a large part of the population residing in small towns and rural areas do not hold demat accounts and the fact that even though India accounts for approximately 35-per cent of global investment in gold, investors put their money in gold, not only to see value of their investment grow, but also to use the metal for making jewelry later.

### **Fund of Funds (FOF)**

In the U.S. mutual fund market, FOFs do offer diversification benefits to investors. These benefits exist at both the fund company and manager level, and FOFs outperform traditional equity mutual funds with similar investment objectives. The FoF is another innovation that has made a mark. Over the past decade the U.S. mutual fund industry has experienced rapid growth in a category of mutual funds known as Funds of Funds (FOFs), which distinguish themselves by investing in shares of other mutual funds rather than buying individual securities. These types of funds thus provide a unique opportunity to examine several relevant issues regarding mutual fund management, services and performance. FOFs offer advantages over traditional mutual funds, such as: instant diversification across different fund companies and managers; providing a mechanism for investing in those traditional funds with high minimum initial investments and closed funds.

A fund of fund scheme invests in other mutual fund schemes. FOF schemes invest in specific funds, which have more weightage of certain stocks & can exit from those schemes when growth prospects of those sectors are not good. Franklin Templeton India Asset

Management Company launched the first fund of fund in the Indian mutual fund industry known as the Franklin Templeton India Life Cycle Fund in 2003. There are 32 FoF schemes in India with AUM at Rs 2311 crores (US\$ 0.5 B) as on February 2007. It is expected that the funds will become more popular in the years to come.

### **Dynamic Multi Manager Fund of Funds (DFoF)**

The DfoF is another innovation that is designed as a dynamic asset-allocating portfolio between equity and debt funds (including debt, liquid and money market funds). India's 1<sup>st</sup> Multi Manager FoF is the Optimix Dynamic Multi Manager FoF scheme. OptiMix is the Multi manager division of ING Investment Management India Pvt. Ltd.

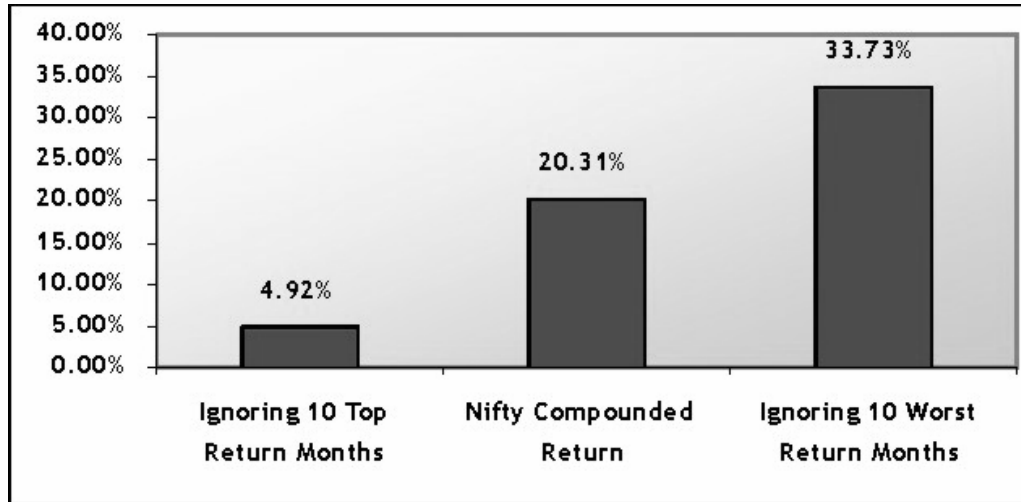
The portfolio can hold up to 100% of its assets in equity and shift dynamically to debt/liquid up to a maximum of 100%, depending on market conditions. The equity component of the portfolio is managed using the proprietary multi-manager process. This flexibility to dynamically allocate between debt/liquid funds and equity is needed because equity markets are essentially volatile. To an investor the fluctuations in the market indices make his decision to stay invested or to quit, a tough one to make. In a rising market, several investors find themselves having moved out too quickly, as the market moves up even after they have booked their profits. In a falling market, investors worry about the loss in the value of their portfolio but are unwilling to book the losses after the fall. Most investors prefer a strategy that stays invested in the rising markets, and cuts losses in a falling market. Without dynamically switching between debt/liquid and equity, it is tough to implement such a strategy.

There are three important differences between any other equity fund and DFoF. First, equity funds are required to hold at least 65% in equity assets, to be classified as such; therefore their ability to switch to debt/liquid funds is limited by this definition. Two, equity funds have to liquidate their holdings in the market, to be able to switch to debt/liquid funds; this strategy is not only costly, but also difficult to implement in a falling market where liquidity of stocks can reduce. Three, single manager equity funds are impacted by the style of the manager, which need not always be tactical changes in asset allocation between equity and debt/liquid funds.

DFoF is a multi manager fund that is not impacted by any single manager's style. It can pursue a debt & equity strategy using multiple pure equity funds and debt/liquid funds, combined together in a single FoF product. If investors see the need for dynamic asset allocation, DFoF is best structured to implement it efficiently and at low cost. Staying invested in a bull market and staying out in a bear market can result in significant gains even to a long-term investor, as the figure below illustrates.

DFoF adds value from its multi manager investment process. The equity component is invested through a careful unbiased selection and blending of multiple funds, with the objective of holding funds that are best of breed, complementary in style, and together provide the scope to earn consistent returns. The ability of funds to generate alpha, over and above the benchmark, is a function of manager style, among other things. It is tough for a single style to outperform across all market cycles. A multi manager strategy enables capturing and compounding manager alpha over time, which is a significant value add over the dynamic asset allocation strategy.

Fig. 5: Compounded Annual Returns—NIFTY—July 1990–June 2006



Source: [www.optimixnet.com](http://www.optimixnet.com)

### Capital Guaranteed Fund (CGF)

The main element of the CGF is its capital preservation feature. A CGF is usually guaranteed by guarantors who are required by the Securities Commission of USA to be licensed financial institutions like banks or merchant banks with good credit ratings. These banks will receive guarantor fees in exchange for their bank guarantees. These fees are borne by the management company.

A CGF is a unit trust that is structured to provide investors with returns while guaranteeing investors against any capital losses at the maturity period of the fund. The fund tends to have a limited lifespan, usually between 3 and 5 years.

The capital guarantee feature is, in most cases, applicable only to investors that hold his/her investment until the fund's maturity date. Franklin Fixed Tenure Series VI—60 months, is one of the latest capital guaranteed product on offer. CGF are close-ended mutual funds schemes that invest predominantly in debt. The percentage of assets that are invested in debt is calculated based on the yield prevailing on the debt paper at the time of investing. The debt component is structured in a manner that allows the fund to (at least) recoup the capital for investors at the time of redemption/ maturity. A portion of assets that do not need to be set aside for the capital guarantee are invested in equities or held in cash. By innovating a strategy of combining debt component (which can guarantee capital) and equities (that can act as a capital appreciation investment avenue), investors get the best of both worlds— growth and capital preservation.

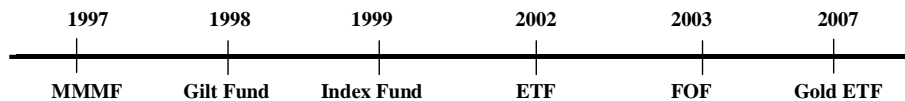
### Inverse Index Fund

Equity funds can't expect to make money when markets fall. But, Benchmark Inverse Index Fund is one of them, which, promises otherwise by bringing an innovative concept. It has a 100 per cent short position on the Nifty, with any spare cash in money markets. If the

Nifty falls 1 per cent, it returns 1 per cent plus the interest earned on money market instruments. If the index rises 1 per cent, it loses 1 per cent, less the interest income.

The following time line captures the inception of the various schemes in India.

**Fig. 6: Time Line Depicting Inception of Some Innovative Schemes**



Therefore, it can be seen from figure 6 that schemes, which were considered exotic in the Indian context till phase II, got introduced in India from phase III.

## INNOVATION IN MARKETING AND DISTRIBUTION

The MF industry has adopted innovative marketing & distribution methodologies to tap investors. It has also used technology and Internet innovatively as a tool to increase awareness and popularity of MF products and increase the asset base. Innovations will lower transaction cost and time, empower customers with information and decision-making tools, lower overall expenses and increase the velocity of transactions manifold. The innovative strategies adopted by the USA MF industry are first discussed.

In 1992, Charles Schwab pioneered the concept of the fund supermarket in USA and opened up an entire new world to investors. Fidelity, Warehouse, Jack White, and most of the major online brokers like E\*Trade and Ameritrade now offer a myriad of choices on one site. Prior to the advent of fund supermarkets, investors either had to hire a full service brokerage account or open an account with each mutual fund family.

Fidelity redefined how investors could use the telephone for managing personal investments when, in the mid-1970s, it became the 1st company to sell retail mutual funds directly through a toll free number in USA, and again when it developed the award winning Fidelity Automated Service Telephone System (FAST) in 1983. The FAST system handles 75% of the calls from retail and institutional customers, of which Fidelity received more than 613,000 a day in 2000.

The company broke new ground again in 1998 when it introduced one of the financial services industry's most sophisticated natural language speech recognition capability over Fidelity's automated phone service. Instead of using touch-tone, customers could now speak their requests, and the application, which recognizes regional American dialects from across the nation, will process the request.

Nearly all Fidelity investor centers are equipped with touch screen kiosks that allow investors to research and invest on their own. Discovery kiosks allow customers to access selected portions of Fidelity.com where they can research investment strategies. At the trading kiosk, customers can get real time quotes, trade on-line and access their accounts. And for the security and privacy of the customer, all kiosks have measures in place to erase the information from the screen when the customer steps away.

Automated deposit machines also are located in most investor centers, allowing customers to quickly make deposits without having to wait in line. One cheque can be easily divided

among several accounts, thereby making deposits easier and more efficient. Record keeping is simplified when a picture of the deposited cheque is printed on the receipt.

Fidelity's innovative use of technology has opened new markets, improved its customer service, streamlined its business operations, and distinguished Fidelity as a technology leader both within the financial services industry and beyond.

To enhance service to investors, funds in India are also instituting a toll-free inquiry facility enabling investors to access information about the fund without any charges.

One of the websites providing mutual fund information in India has an offline version, which is an excellent tool that provides one the convenience of analyzing and tracking mutual fund data right at one's doorstep. It is a desk top menu driven application, powered by the most customized and user friendly analytical tools which does all the calculations, analysis, reporting, updating at the click of a mouse. It allows one to view details, compare performance, customize queries on over 800 mutual fund schemes, while keeping one updated on the latest in the industry. This offline version provides insight into the industry and enables one to take informed decisions about investing and managing one's saved money in mutual funds.

There is another product, which is a complete solution for managing the operations of distributors of mutual funds and other third party products. It enables a smooth and effective management of the distributors operations by taking care of the entire process flow beginning with the appointment of agents, generation of codes, complete tracking of all transactions, calculation of brokerage and commissions payable and payment thereof. It generates powerful periodical reports, which further makes the monitoring of the distribution back office centralized, systematic and efficient.

Straight through processing of investor transactions, at investor or distributor end will emerge as the most favoured transacting method. With greater connectivity and cheaper networking cost, it is expected that mutual fund investments will be available through a variety of devices from ATMs to mobile phones to PDAs, with digital signature technologies eliminating the need for paper flow. These would be backed by real time fund reconciliation and statement generation at the fund management end.

The RBI has announced the decision to permit scheduled commercial banks to offer "cheque writing" facility of gilt funds and those liquid income schemes of MFs which predominantly (not less than 80% of the corpus) invest in money market instruments. Consequently, some of the MFs have introduced limited cheque writing facility by allowing its unit holders to issue cheques against a savings account with a designated bank.

There are 45,000 AMFI certified individuals in India, but less than 15,000 active mutual fund distributors. This compares unfavorably with the Life Insurance Corporation of India (8,00,000 agents) or even private insurers (1,50,000 agents). Convergence and aggregation in financial services will lead to the MF agents' numbers leaping manifold. Also less tapped segments like the vast branch networks of public sector banks, the post office, as well as emerging alternative channels like the rural marketing networks of FMCG companies, will get integrated into the MF distribution chain.

Roy (2005) says the poor impact of mutual funds at the macro level can be attributed to their lack of retail penetration. Retail penetration can come about only if MFs have points of

contact across the country, as shown by the impact of bank branch expansion. To illustrate, the banking industry with 68,193 branches had 14.02 crore term deposit accounts aggregating Rs 7,97,403 crore (US\$ 173.3 B) in term deposits in March 2002. The banking industry's total deposits, for the said period were Rs. 12,05,930 crore (US \$ 262 B). Whereas mutual funds, which are based primarily in Mumbai & other metropolises, with a poor branch network, had 3.08 crore investors aggregating to AUM of Rs. 1,00,594 crore (US\$ 21.8 B) in March 2002.

Therefore, if the mutual fund industry is to have a meaningful impact at the macro level, it has to seriously explore innovative modes to penetrate the retail sector. Establishing point of contact with retail investors, through branch networks, could be the key factor in this regard. Mutual funds will have to fully exploit the branch network of the banks and explore tie-ups with post office branches for establishing point of contact with retail investors.

Social security issues, further deregulation of the financial industry and worldwide demographics will likely play a significant role in shaping the industry as well.

### **ANALYSIS OF IMPACT OF INNOVATIONS IN MUTUAL FUNDS**

Klapper, Sulla and Vitas (2004) found that capital market development (reflecting investor confidence in market integrity, liquidity and efficiency) and financial system orientation are found to be the main determinants of MFs development.

Khorana and Servaes (2004) said that, product differentiation strategies are also effective in obtaining market share. Families that perform better, and start more funds relative to the competition (a measure of innovation) have a higher market share. Innovation is rewarded more if the new fund is more differentiated from existing offerings and is in a less crowded objective. Finally, market share within an investment objective is driven primarily by a family's policies within that objective, but there are important performance spillover effects from other funds in the family. Our findings are robust to various tests for endogeneity of the explanatory variables. Overall, this paper highlights a number of conflicts between fund families and investors.

In the context of Indian MFs, we analyze through econometric tools the impact that innovations have played in the growth of the MF industry and also whether MFs have emerged as a key driver for the Indian stock market.

We carry out a Regression analysis to understand whether MFs are playing a significant role in the Indian stock market. The period of study for this paper is January 2003 to January 2007 where the data for MF daily equity inflows and daily closing on Nifty, which has been taken as the proxy of the Indian stock market, is taken.

A regression is a functional relation between at least two variables and is generally defined by the form,  $Y = f(X)$  where the attempt is to find a distinct mathematical relation between dependent and independent variables. This functional relationship ensures the existence of some causal relation between variables, so that some conclusions can be made about the significance of the relation by a distinct or particular mathematical or deterministic form. Like other models, regression methodologies are also statistical models where some set of assumptions are specified to describe the real world situations, though a model cannot probably explain everything about the real world.

Common experience suggests that, high Nifty value attracts more funds. In order to quantify this relationship a linear regression is the easiest way to do the same where MF inflow is dependant on Nifty\_closing.

And our hypothesized relationship between the two variables of our interest is as follows-

$$MF\_Net = \alpha + \beta \text{ Nifty\_Clo} \tag{1}$$

Where,

$\alpha$ - Constant term.

$\beta$ - Intercept term.

At first, F-value is checked which is a way to assess the prediction capacity of the fitted model. The F statistic, in the ANOVA Table, is significant as the p value is less than .05, which signifies that the model is significantly better at predicting the outcome variable.

**Table 2**  
**Anova Results**

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	366677.906	1	366677.906	17.576	.000
Residual	20799380.136	997	20861.966		
Total	21166058.043	998			

Predictors: (Constant), NIFTY\_Closing

Dependent Variable: MF\_Net

Table 3 gives the contribution of the independent variable to predict the dependent variable of the model, that is, Mf\_Net.

**Table 3**  
**Summary of Regression Coefficient**

	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
(Constant)	-25.834	12.396		-2.084	.037
NIFTY-Closing	.022	.005	.132	4.192	.000

Dependent Variable: MF\_Net

The coefficient of Nifty\_Closing, in Table 3 is positive, representing the positive relationship between the dependent and independent variable. The corresponding p value of the t-statistic, under the null hypothesis that the population regression coefficient is zero, stands at a very low value, indicating the predictor (that is, Nifty) is making contribution to predict the dependent variable MF\_Net.

The standardized value of the coefficients is taken, as it is easy to interpret the coefficients that are independent to the units of the model and scale of the variables considered. The standardized value of the coefficients signifies the standard deviation change in the dependent variable (MF\_Net) due to one standard deviation change in the predictor variable (Nifty).

Thus, the regression equation comes out as,

$$\text{MF\_Net} = 0.132 \cdot \text{Nifty\_Clo} \quad (2)$$

Therefore, the paper has been able to establish a causal relationship between MF equity inflows and the Indian stock market and it influences MF inflows positively.

In MFs, overtime, several schemes have been launched where some schemes are modifications over the existing schemes and many are completely innovative. It is interesting to assess the importance of new and old schemes in augmenting the AUM of MFs so that the effect of innovations in MFs could, to some extent, be captured.

This paper makes an attempt to quantify the significance of new and old schemes in total AUM by means of Pearson correlation.

Simplistically, Pearson correlation can locate the linear association between two variables. The correlation coefficient ranges from  $-1$  to  $+1$  and the closer the correlation value to either  $-1$  or  $+1$  the stronger the correlation between variables. Any value between the ranges implies the degree of linear dependence between the variables.

From January 2001 to 2007 Feb, the period of 36 months has been rolled four times and a Pearson correlation test is run on these 36 months each to identify the impact of innovation. The following table provides the correlation between new schemes and total collection and old schemes and total collections for 3 years periods.

**Table 4**  
**Correlation Table for Rolling Three Years Periods**

<i>Period</i>	<i>New Schemes &amp; Total AUM</i>	<i>Old Schemes &amp; Total AUM</i>
2001-2003	0.500	1
2002-2004	0.548	0.999
2003-2005	0.733	0.997
2004-2007 (till Feb)	0.981	0.486

It is evident from the table that during 2001-2003 correlation between old schemes and total collections was the highest one and that between new schemes and total AUM was moderate. However, several innovative schemes of MFs of latter periods are showing their increasing importance in raising the AUM, as it is clear from the correlation table. The new schemes are steadily inching their position and importance over the traditional schemes. The correlation for new schemes increased from a modest correlation of .500 to a significant value of .981 whereas the correlation for the old schemes reduced from .997 for the period 2003-2005 to .486 for 2004-2007.

Thus the paper develops the fact that MF investments and Indian stock market are interrelated. Moreover, the new MF schemes are playing an increasingly significant role in the increase of AUM in India.

## CONCLUSIONS

The MF industry started in India with the Unit Trust of India in 1964, which remained the only player till 1986. The private sector funds were allowed in India in 1993 when the AUM was approximately US \$ 10 billion. Since then there has been a phenomenal growth and the AUM in February 2007 stood at more than US \$ 75 billion. It has been possible due to the large



number of innovative schemes, which these players have regularly introduced in the Indian market. Besides product innovations, these funds have also resorted to many innovative marketing and distribution strategies. Regression analysis has confirmed the causal relationship between the MF equity inflows and the Indian stock market. A Pearson correlation test confirmed that the new innovative MF schemes are playing a more dominant role in the increase of AUM. Further, deregulation of financial industry, increased penetration of the rural market, establishing more point of contact with retail investors, offering cheque writing facility, seamless transfer of funds, use of digital signature technology and continuous innovations will drive the MF industry. If the past can be any indication of future, the coming years will continue to bring change, excitement, continual innovations and rapid growth to the MF industry in India.

### References

- Covrig, V., Lau, S. T. and Ng, L. (2006), “Do Domestic and Foreign Fund Managers have Similar Preferences for Stock Characteristics? A Cross-Country Analysis”, *Journal of International Business Studies*, 37(3), 407-430.
- Dow, Jr. P. James, and Elmendorf W. Douglas (May 1998), “The Effect of Stock Prices on the Demand for Money Market Mutual Funds” Paper provided by Board of Governors of the Federal Reserve System (U.S.) in its series Finance and Economics Discussion Series with number 1998-24.
- Fischer E. Donald, and Jordon J. Ronald. (1995), *Security Analysis and Portfolio Management* (Sixth Edition): Prentice–Hall of India, pp. 516, 653-654.
- Khorana Ajay, Servaes Henri and Tufano Peter (2005), “Explaining the Size of the Mutual Fund Industry Around the World” *Journal of Financial Economics* (2005).
- Khorana Ajay and Sevaes Henri (2004), “Conflicts of Interest and Competition in the Mutual Fund Industry”.
- Klapper, L, Sull, V. and Vittas, D. (2004), “The Development of Mutual Funds Around The World”, *Emerging Markets Review*, 5(1), 1-38.
- Marcis, R., Sandra, W. and Leonard-Chambers, V. (1995), “Mutual Fund Shareholder Response to Market Disruptions”, *Investment Company Institute*, 1(1).
- Poterba, J. M. and Samwick, A. A. (1996), “Stock Ownership Patterns, Stock Market Fluctuations, and Consumption”, Working papers 96-2, *Massachusetts Institute of Technology* (MIT).
- Roy S. Manjesh (2005), “Money Market Mutual Funds—A Macro Perspective” *Economic & Political Weekly*.
- Tufano P. (2003), “Financial Innovation” *The Handbook of the Economics of Finance*, 1(1), 307-335.
- Vijay Govindarajan and Chris Trimble (2006), *Ten Rules for Strategic Innovators: From Idea to Execution*, Boston, MA: Harvard Business School Publishing.
- White J. L. (1997), “Technological Change, Financial Innovation, and Financial Regulation: The Challenges for Public Policy” *Center for Financial Institutions Working Papers, Wharton School Center for Financial Institutions, University of Pennsylvania*, 97-33.
- <http://hbs.edu/archive/5123.html#1>
- <http://www.amfiindia.com/> Last Accessed on 31<sup>st</sup> March 2007
- <http://www.ici.org/> Last Accessed on 31<sup>st</sup> March 2007.
- <http://www.wikipedia.org> Last Accessed on 31<sup>st</sup> March 2007