Chapter 2

Review of Literature

Introduction

Many scholars have made studies on investors’ behavior, and many studies are going on. From the available studies from secondary sources the literature is reviewed here to have better clarity of investors’ behavior and the study. Thereafter the empirical studies done on the similar areas of research in international context as well as in Indian context were highlighted. The purpose of literature survey in any study is to help the researcher, to find out the gap between the research that has already been conducted and the theoretical linkage of the research.

2.1 Evolution of Theories on Investors’ Behavior

With the growing importance of the subject under study, some literature, covering different aspect of investors’ preferences has been produced by researchers, economists, and behavioral scientists. Empirical evidence which seem to strongly contradict the assumption that price cannot be determined, but is obtained randomly have stimulated the recent development of what has come to be known as "behavior finance". Assumptions behind the theories on the behavior of investors are often based on psychological research or common sense. However, clearly, the study of the behavior or the development of financial markets could benefit of a more complete image, if it would be known how investors actually behave and how they react to the same information
A Study of “Investors’ Behaviour in Financial Market”

depending on the differences between them (behavior conduct). Economic theory of Choice works under the premises that patterns of behavior in societies reflect the choices made by individuals as a result, patterns of behavior within society will develop the results from those choices.

1954 Franco Modigliani’s (1954) Life-Cycle hypothesis, an early pioneering work, assumes that people save in order to smooth their consumption over their lifetime. One important objective they have is to generate an adequate retirement income. Hence people tend to save while working so as to build up wealth before retirement, and then they spend their accumulated savings in their twilight years. The hypothesis assumes that individuals are well-informed and forward-looking decision makers.

Sharpe (1964) proposed a model called capital asset pricing model (CAPM), which was the first general equilibrium model of asset prices that incorporated risk. CAPM predicts that all individuals hold the same portfolio of tradable securities but in varying proportions and the prices of the assets will be linearly related to their correlations with the market portfolio. Unfortunately these predictions has been strikingly rejected by empirical studies of individual behavior and asset prices, reason being much individual’s portfolio differ by age and wealth and the correlation of a security price with market portfolio explains only a small part. The focus of CAPM is mainly towards the institutional investors. Another shortcoming of CAPM as far as portfolio management is concerned was that it only looked one period ahead.

Samuelson and Merton (1969) extended the single period model into multiple period models. In related papers, Samuelson (1969) and Merton (1969) modeled a decision maker who can invest in two assets: a risk-free bond which
pays a constant rate of return, and a risky stock with a constant equity risk premium. The individual was assumed to face no transactions costs, to be able to borrow and lend at the same rate, to have no portfolio restrictions, and to receive no labor income. That research concluded that investment decisions are independent of the time to the end of life. Under very special circumstances: if investment opportunities are constant and utility has a certain functional form, investors behave exactly as though the current period is the last one. This holds because for CRRA preferences, the two effects described in the previous paragraph exactly cancel each other out. The two-fund separation theorem of Markowitz holds in this model: investors only need the risk free asset and one mutual fund (the market portfolio) and they will be able to achieve the optimal portfolio regardless of their risk aversion.

Empirically, a large number of studies in recent years have investigated the factors, which influence the composition of investment behavior. Some of them are summarized in this section. The studies included here in this section were tried to explore the differences in household portfolio in general and investments in risky assets in particular. To a certain extent, there could be cultural differences across countries and regions and as per the purpose of the research the empirical studies summarized here were classified under two segments, one way the study of household portfolios in international context and second was the study conducted in India. There were number of studies done on the household portfolios and investment behavior in many developed country, only few past and recent studies were taken in the literature review.
2.2 Empirical Research Evidences in International and Indian Context

Manoj Kumar Dashl (2010) Factors Influencing Investment Decision of Generations in India: An Econometric Study This study aims to gain knowledge about key factors that influence investment behavior and ways these factors impact investment risk tolerance and decision making process among men and women and among different age groups. The individuals may be equal in all aspects, may even be living next door, but their financial planning needs are very different. It is by using different age groups along with Gender that synergism between investors can be generated. In this context, demographics alone no longer suffice as the basis of segmentation of individual investors. Hence keeping this in mind, the present study is an attempt to find out Factors which affects individual investment decision and Differences in the perception of Investors in the decision of investing on basis of Age and on the basis of Gender. The study concludes that investors’ age and gender predominantly decides the risk taking capacity of investors.

Syed Tabassum Sultana (2010) has studied Indian investor today have to endure a sluggish economy, the stock market declines prompted by deteriorating revenues, alarming reports of scandals ranging from illegal corporate accounting practices like that of Sat yam to insider trading to make investment decisions. Stock market’s performance is not simply the result of intelligible characteristics but also due to the emotions that are still baffling to the analysts. Despite loads of information bombarding from all directions, it is not the cold calculations of financial wizards, or company’s performance or widely accepted criterion of stock performance but the investor’s irrational emotions like overconfidence, fear, risk aversion, etc., seem to decisively drive and dictate the fortunes of the market. This paper while discussing the characteristics of the Indian individual investors along makes an attempt to discover the relationship between a dependent variable i.e., Risk Tolerance level
and independent variables such as Age, Gender of an individual investor on the basis of the survey. Indian investors are high income, well educated, salaried, and independent in making investment decisions and conservative investors. From the empirical study it was found that irrespective of gender, most of the investors (41%) are found have low risk tolerance level and many others (34%) have high risk tolerance level rather than moderate risk tolerance level. It is also found that there is a strong negative correlation between Age and Risk tolerance level of the investor. Television is the media that is largely influencing the investor’s decisions. Hence, this study can facilitate the investment product designers to design products which can cater to the investors who are low risk tolerant.

Philip R. Brown, Andrew Ferguson, Sam Sherry (2010) in this paper author calibrates the effect of Australia’s Capital Gains Tax (CGT) on share prices and market activity. Based on a large sample drawn from all listed Australian companies for the years 1994–2007, we find significant tax-loss selling (TLS) of shares that lost value over the financial year, which is reflected in unusually high trading volume and more sell orders in June and a rebound in July. There is some evidence that small mining stocks are particular targets for TLS. Interestingly, the 1999 CGT reforms, which introduced concessions for long-term capital gains, did not reduce the incidence of TLS.

Saurabh Singh (2009) Investors’ Behavior at Indian Capital Markets Investment decisions made by the investors’ are not solely dependent upon price movement and stability of the markets. The study has resulted in listing, factors as age, sex, education, family, and the past performance of a company’s securities as variables or attributes, having significant influence and impact on the investor’s investment decision making process. Risk evasiveness was found to be the case with majority of investors’, very much unlike the present day young investors’ who happen to be comparatively skilled, informed with access to all kind of sources of information, and having more appetite for risk. The fact that
assumption of ‘rational behavior’ was itself erroneous has time and again been exposed by researchers and scholars of the discipline. The present study identifies, understands and explains that how human emotions influence the investors’ decision making process. The element of emotions silently contributes towards increasing the probability of mistake on the part of investors’ itself and consequently resulting in false or biased expectations as regards to future returns to be gained from present investment leading to mispricing of securities in the market. The element called ‘emotions’ [being witnessed as behavior to outside world] and ‘psychology’ are supposed to study human fallibility, systematic mistakes and biased judgments. Launching

*Ashok Khurana Vikas Chaudhary (2009)* An Empirical Study of Retail Investor’s Attitude towards Investment in Mutual Funds

In the financial industry, Mutual Funds has become a hot favorite of millions of people all over the world. A mutual fund is a special type of institution, a trust or an investment company which acts as an investment intermediary and invests the savings of large number of people to the corporate securities in such a way that investors get steady returns, capital appreciation and a low risk. It is essentially a mechanism of pooling together the savings of a large number of investor for collecting investment with an avowed objective of attractive yields and appreciation in their values. The concept of 'Mutual Fund' is a new feature in Indian capital market but not to international capital markets. A mutual fund in the most suitable investment for the retail investors as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost. At the retail level, investors are unique and are a highly heterogeneous group. A large number of investment options are available to investors. Currently there are large numbers of schemes available and asset management companies (AMCs) compete against one another by new products or repositioning old ones. Unless mutual fund schemes are tailored to the changing needs, and the AMCs understand the fund selection behavior of the investors, survival of funds will be difficult in future. With this significance an attempt is made to study the attitude of mutual fund investors.
Overconfidence in Psychology and Finance - An Interdisciplinary Literature Review

In this paper reviews the literature on one of the most meaningful concepts in modern behavioral finance, the overconfidence phenomenon. Overconfidence is presented as a well-developed psychological theory, with main facets comprising miscalibration, better-than-average effect, illusion of control and unrealistic optimism. The primary applications of overconfidence in contemporary finance are analyzed, from the perspective of financial markets and corporate behavior. Experimental studies, formal models and analyses of market data demonstrate that overconfidence at least partially solves some financial market puzzles that cannot be accounted for by standard economic theory. Overconfidence in the corporate context may affect not only a company's internal financing structure, but also its interactions with other market participants through merger and acquisition activity.

Xinhua and Yongfu (2007) on Chinese saving rate has found that the most widely adopted view of precautionary saving which is regarded as the top reason of high saving rate in China is misleading and infect the household saving rate has declined dramatically since the mid 1990's the stud's further attributed the high national saving rate to the increasing share of both government and corporation disposable income. In a comparative study of saving rate of Japan and the USA, Hayashi (1989) found that Japanese saving rate was higher than that of USA.

R.R. Raja Mohan (2006) in his research “an empirical study on the impact of financial knowledge on household portfolios’ studied the impact on pensioners. He found that although Indian government has introduced contributory pension plans to the newly recruited employees from January 2004 and seven State governments have introduced the scheme to their employees and others have shown interest still the new system calls for the participant to
manage their contribution by placing the responsibilities in deciding where their contribution should be invested and who should manage their contribution. He further highlighted that the work force is not ready to take such decision. Thus the study aimed at looking into this aspect by analyzing the relationship between the financial knowledge and the investment of households in risky assets. The study found the existence of a significant and positive relationship between the financial knowledge and ownership of risky assets, which calls the attention of the policy makers while proceeding further in implementing the defined contribution pension plan.

Kavitha Ranganathan (2006) Madurai kamraj university in her research paper stated that consumer behavior from the marketing world and financial economics has brought together to the surface an exciting area for study and research: behavioral finance. The realization that this is a serious subject is, however, barely dawning. Analysts seem to treat financial markets as an aggregate of statistical observations, technical and fundamental analysis. A rich view of research waits this sophisticated understanding of how financial markets are also affected by the 'financial behavior' of investors. With the reforms of industrial policy, public sector, financial sector and the many developments in the Indian money market and capital market, Mutual Funds which has become an important portal for the small investors, is also influenced by their financial behavior. Hence, this study has made an attempt to examine the related aspects of the fund selection behavior of individual investors towards Mutual funds, in the city of Mumbai. From the researchers and academicians point of view, such a study will help in developing and expanding knowledge in this field.

Harry M. Kat, Roel C.A. Oomen (2006) in this paper What Every Investor Should Know about Commodities, Part II: Multivariate Return Analysis author studied the multivariate return properties of a large variety of commodity futures. We find that between commodity groupings (such as metals, energy,
etc.) correlations are very low and mostly insignificant whereas within groups they tend to be much stronger. In addition, commodity futures are roughly uncorrelated with stocks and bonds. Still, correlations may vary somewhat over the different phases of the business cycle, suggesting that not all commodities make equally good diversifiers at all times. Copula-based tests do not indicate any deviant behavior in the tails of the joint return distribution of commodity futures and stocks or bonds. Contrary to equities and bonds, we show that commodity futures returns are positively correlated with unexpected inflation (i.e. 25% on average with CPI inflation as opposed to -30% for equities and -50% for bonds). There are significant differences between the various commodities, however, with energy, metals, cattle, and sugar offering the best hedging potential. Altogether, assuming that the observed regularities will persist, our results confirm that a well-balanced commodity futures portfolio could offer a worthwhile diversification service to the typical traditional.

**Tomeo Moore, Christopher Green and Victor Murinde (2005)**

estimated a flow of funds model for the household sector in India, within the Almost Ideal Demand System (AIDS) framework, and examined the demand for money and the substitution effects between money and other financial assets. The restricted long-run model, obtained by using co integration techniques, which provides stable equilibrium relationship between I (I) variables and broadly satisfies the axioms of rational choice in consumer demand theory. They have found out that financial sector reform exerts a significant impact on the interest rate structure and household portfolio preferences; specifically, there is strong substitutability among risk-free assets and a possible speculative effect in the stock market, while the exchange rate strongly influences the demand for money. These findings all have important policy implications.
Vaidyanathan (2004)\textsuperscript{xvi} analyzed the secondary data regarding household savings in India during the period 1961-2001. He found that in India the self-employed, not having any old aged income-providing scheme, fall back on gold resulting in large savings in the form of gold. He calls for the life insurance companies to come up with innovative products to capture this huge untapped market. In the study, financial knowledge is represented by a score, which is used to study the relationship between financial knowledge and financial behaviour. Planning is represented by a score, which is used to study the relationship between retirement wealth accumulation and saving.

The ‘ET Retail Equity Investor Survey (2004)\textsuperscript{xvii} designed by ET intelligence group (ETIG) along with AC Neilson ORG-MARG interviewed 513 retail investors in Mumbai, Delhi, Kolkata, Chennai, and Ahmedabad who had invested a minimum of Rs.10,000 into equities in secondary markets. The study found that the investors are smart in terms of setting book-profit or cut-loss limits and adhering to it, averaging their investments. However it also found that only 2 percent of the investors hold the securities for more than 1 year and for half of the respondents it was only 75 days.

Mukhopadhyay (2004)\textsuperscript{xviii} studied the profile of 200 Kolkata investors. Using a questionnaire based survey; he found that aged people prefer less risky investments while the youngsters are aggressive in risky investments. One of the questions asked the investors risk perception about capital market investments and found that people having lower qualification outnumbered the people having higher qualification in answering that tile stock market investment is risky.
MARCH Survey (2004) Using 1398 samples covering Ahmedabad, Bangalore, Chennai, Delhi, Hyderabad, Kolkata and Mumbai cities, found that investors in the western region of the country prefer to take risks in investments as against investors in the south, but in terms of diversity of investment portfolio surprisingly it was the South Indian investors who had the most diversified investment portfolio.

Marianne A., lilgert et al (2003) using 1004 respondents of the monthly Survey of Consumers conducted in November and December 2001 analyzed the impact of financial knowledge on financial behaviour. They found that financial knowledge test scores had a significant positive relationship to cash flow management, saving management and investment management.

Annika Sunden (2003) using National Social Insurance Board (NSIB) survey of 1000 Swedish individuals of 2003 analyzed the impact of information and education initiative of pension reform on households. She showed that the information and education initiative by the Swedish Government had some success in increasing knowledge about the reformed system. At the same time, participants also reported that they needed more information and hence felt that it is equally important to design pension plans to make it easy for the participants to understand and use them.

Kavim V. Bhatnagar, (2002) in his Fellow Program in Management from Nirma Institute of Management, Ahmedabad studied the pensioner’s behavior towards the diversification. In his work “Do Indian Pensioners hold Diversified Portfolio?” he has found out that the Asset allocation, (the decision of how much of a portfolio to allocate to different types of securities), is one of the
fundamental issues in financial economics. The paper examined the portfolios created out of lump-sum pensioner’s benefits received by 495 government pensioners who retired between 1967 and 2002. The paper had used the available data for the household investment in financial assets between 1970 and 2002, and complied that with the investment in financial assets of the pensioners. He was further concluded that pensioners in the sample remain under-diversified. Over the years, the average number of assets in pensioner portfolio has increased resulting in a decrease in the average portfolio variance. This may be ascribed to facts that reforms in Indian market opened floodgates for investment avenues and that these improvements resulted primarily from changes in the correlation structure of the Indian household investment market. Least diversified portfolios were found amongst pensioners who had lesser funds at their disposal and retirees of lower class (junior) categories. An analysis of a cross sectional variations in diversification across demographic groups also suggest that younger, active and recent retirees are over-focused thereby holding under-diversified portfolios, not by chance but by choice. By and large, results indicated that pensioners face an intimidating task of constructing and maintaining a well-diversified portfolio despite realizing the benefits of it.

**Indian Investor Economic Foundation (IIEF-2002)**

survey, surveyed 1832 Indian respondents in July 2002, to assess the knowledge, attitudes and behaviors of individuals towards retirement, saving, risk, investments etc. It concluded that it might be appropriate to assume that a quantum improvement in financial knowledge among individual investors’ would result in continued voluntary participation in the new pension system.

**Annette Vissing-Jorgensen (2002)** studied the household portfolio heterogeneity using PSID panel data of 1984, 1989 and 1994 consisting of around 3500 U.S. households. She found that non-financial income of the household had
a positive impact on the ownership and the share of risky assets and education had a positive impact only on ownership of risky assets in their portfolio.

Ameriks, Caplin, and Leahy (2002)\textsuperscript{xxv} using a cross sectional study of 500 U.S. participants of Survey of Financial Attitudes and Behaviour (FAB) 2001 surveyed in January 2001, analyzed why do similar households end up with very different levels of wealth. They showed that households with a higher propensity to plan are associated with increased wealth accumulation. They also found that the annihilation rates among the retirees are low and opined that one of the major reasons is the lack of consumer understanding of the financial assets and products. They also found a negative impact of defined benefit pension plan on gross financial assets.

Yilmazer (2001)\textsuperscript{xxvi} analyzed the factors influencing the portfolio allocation among 6 asset categories using 1989, 1992, 1995, and 1998 Survey of Consumer Finance data. He showed that the probability that a household owns a home increases with each additional child while their share of investment in stocks decreases with an increase in the number of children.

Lusardi (2001)\textsuperscript{xxvii} emphasized that understanding the link between saving and planning may have implications for examining the consequences of changes in pension plan provisions, such as the current shift among employers from defined benefit pension plans to defined contribution pension plans. Using the Health and Retirement Study (HRS) 1992- a cross sectional study of 1172 U.S. individuals (households' head who were 50 to 61 years old and neither fully nor partially retired) Lusardi found that the respondents who had not thought of retirement plans are the ones with his/her wealth (excluding the social security benefits) when compared with those who thought about their retirement plans.
L.C. Gupta, C. P. Gupta and Naveen Jain (2001)\textsuperscript{xviii} analyzed 2819 Indian households’ investment preferences during the second half of 1997 and found a gradual improvement in the household portfolio diversification in 1997 when compared to 1990. In 1997, only 18% of the households held 1 or 2 shares when compared to 25% in 1990. At the other extreme one-sixth held shares in more than 20 companies in 1990 and that had increased 1997.

Yoon Geum Lee Jang et al (2000)\textsuperscript{xxix} using a cross sectional study of 2729 South Korean families surveyed in 1994 investigated the factors influencing the percentage share of financial assets in total wealth of the families. They found that wealth was negatively associated and family income positively associated with the share of financial assets in total assets.

The Securities and Exchange Board of India with National Council of Applied Economic Research, SEBI-NCAER (2000)\textsuperscript{xxx} study found that only 7% of all households invested in Shares & Debentures and 9% in Mutual Fund units. The majority of the Equity investor households hold an undiversified portfolio of relatively small value of less than Rs. 25000. It was seen that one set of households, in spite of their lower income & lower penetration level of consumer durables, invest in the securities market, while another set of household with higher income and higher penetration level of consumer durables do not.

James Bank and Sarah Smith (2000)\textsuperscript{xxxi} using cross sectional data of 4800 respondents (collected monthly for the period from Jan 1997 to June 1998) studied the heterogeneity of household portfolio in UK. They found that the
ownership of risky assets showed positive relationship with wealth and education, while age showed a hump shaped profile. They also found that the differential tax treatment across savings products resulted in tax-preferred savings.

**Carol Bertuat and Martha Starr-McCluer (2000)** by using Federal Reserve Board’s Flow of Funds Account (FFA) for the period 1983-1998, and 1989, 1992, 1995, 1998 SCF consisting of 4500 households, studied why the household portfolio is heterogeneous. They found that the portfolio of the typical household remains fairly simple and safe consisting of a checking account, savings account, and tax-deferred retirement account. They showed that wealth and college education had a positive significant effect on the ownership and share of risky assets, while employment status had a negative effect on them. Age showed a mixed effect (negative effect on the ownership and a positive impact on the share of risky asset in total wealth). Income and defined benefit pension plan had a positive impact only on the ownership of risky assets.

**Rob Alessie et al (1999)** using 6 waves of Center Savings Survey (CSS) - a panel consisting of 2500 Netherlands households - for the period 1993-1998 studied the household portfolio heterogeneity. They found that non-capital income, total net worth, interest on financial matters, employment status had positive impact on the ownership of different asset classes, while the household size had a negative impact on it. They also showed that age followed a hump shaped profile. The answer to the statement, “I am very interested in financial matters (insurance, investments etc.)” is used to grade (in an eight point scale) the respondents’ interest on financial matters.
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Rajarajan (1999)xxxiv using 405 Chennai investors studied the size of financial investments and the percentage of financial assets invested in risky category. He showed that the individual investors’ life cycle stage is an important determinant in the size of financial assets investments and the percentage of financial assets investment in the risky category.

Luigi Guiso and Tullio .Jappelli (1999)xxxv using repeated cross sectional and panel data consisting of 8000 Italian households for the period 1989-1995, studied the heterogeneity of portfolio among the households. They showed that wealth, college education and index of financial information had significant positive effect on the ownership and share of risky assets, while age showed a hump shaped profile.

James M. Poterba and Andrew A. Samwick (1999)xxxvi analyzed the portfolio allocation among 8 asset categories using pooled data of 1983,1989,1992,and 1995 Survey of Consumer Finance (15451 U.S. household) and cross sectional data of 1995 SCF (4299 household). They found that income, wealth, education and marginal tax rate had a positive effect on households’ asset allocation decision.

Axel Borch-Supan and Angelika Eymann (1999)xxxvii using 1983, 1988, 1993 German Income and Expenditure Survey (EVS) of 30000 households found that most of the households’ wealth was held in the form of housing and pensions. They showed that the participation in risky assets was influenced positively by wealth and education. Age was found to have a hump shaped profile on the ownership of risky assets. This means the ownership of risky assets
increases initially as the age of the households’ increases up to certain level and then it declines later.

Shanmugham et al (1998)\textsuperscript{xxxviii} using 201 Coimbatore investors studied the profiles of the investors and the factors influencing their decision process. They found that the equity portfolio diversification was moderate. Educational levels of investors had its impact on the use of technical analysis and the occupation had its impact on the use of fundamental analysis.

Anne-Marie Palsson (1998)\textsuperscript{xxxix} studied the impact of interest rate on saving allocation using annual Swedish data covering the period 1964-1995. She found that the financial saving and real saving allocation was quite sensitive to the risk-free rate of return i.e. the financial assets increased and real assets decreased when the risk free rate of return increased and vice-versa.

Loayza and Shankar (1998)\textsuperscript{xl} on Private savings in India, the researchers did a cross country study and they found that the saving rate in China was on average, 70% higher than in India, saving was approximately 50% higher and growth was 100% greater. East Asia achieved a growth rate that was twice as large as India’s with an investment rate that was 34% higher, and a saving rate that was about 45% higher. On the other hand, regarding the relationship between saving, investment and growth, showed India’s long-run averages are quite similar to those of OECD countries. From the direction of saving investment gap, that India was found to rely on foreign saving more than the East Asian countries but notably less than other low-income countries.
Zvi Bodie and Dwight B. Crane (1997) using a cross sectional study of 916 Teachers Insurance and Annuity Association - College Retirement Equities Fund (TIAA-CREF) members (USA), surveyed during February 1996 analyzed the portfolio allocation between retirement and non-retirement funds. They found that equity investment in retirement account had positive impact on equity investment in non-retirement account providing evidence that individuals do not diversify their holdings across retirement and non-retirement accounts and concluded that, given enough education, information, and experience, people might tend to manage their self-directed investment accounts in an appropriate manner.

Stefan Hochguertel at al (1997) studied the portfolio allocation among 4 asset categories using 3077 Netherlands households surveyed in 1988. They found that income, education and tax had a positive impact on the proportion of financial wealth held in risky assets while age had a hump shaped relationship.

Alok Kurnar and Charles M. C. Lee (1997) has conducted a research on “Retail Investor Sentiment and Return Co- movements” in India by using a database of more than 1.85 million retail investor transactions in capital market over 1991— 1996. There main observations were that the trades are systematically correlated—that is, individuals buy (or sell) stocks in concert. Moreover, consistent with noise trader models, they found out that systematic retail trading explains return co-movements for stocks with high retail concentration (i.e., small-cap, value, lower institutional ownership, and lower-priced stocks), especially if these stocks are also costly to arbitrage. Macroeconomic news and analyst earnings forecast revisions do not explain these results. Collectively, their findings support a role for investor sentiment in the formation of returns.
Luigi Guiso, Tullio Jappelli, and Daniele Terlizzese (1996) surveyed 4079 Italian households from January 1988 to December 1988 to study the household portfolio heterogeneity. They found that the investors when confronted with uninsurable income risk and borrowing constraints reduce their exposure to risky assets and keep their wealth in a safer and more liquid form.

Bernheim et al (1996) analyzed the effect of employer sponsored retirement education on household saving behaviour using a cross sectional study of 2055 U.S. respondents aged between 30 and 48 which was surveyed during November 1994. They showed that employer-based retirement education in the workplace strongly influenced household financial behaviour in the form of increased total retirement wealth, retirement saving and participation in 401(k) plan.

Bayer et al (1996) analyzed the impact of employer sponsored retirement seminars on retirement saving, using survey data from 300 U.S. firms (which sponsored pension plan to their employees) for the period 1993 and 1994. They found that employer sponsored retirement seminars are significantly associated with higher rates of 401(k) plan participation and contribution rate.

Peter S. Yoo (1994) using 1962 Survey of Financial characteristics of Consumers, and 1983 & 1986 Survey of Consumer Finances, studied the portfolio allocation among cash, bond, and equity. He found that the relationship between age and portfolio allocation is not linear: young and retired individuals demand less risky assets, bonds than middle-aged individuals.
L.C. Gupta (1993) analyzed 1755 Indian households’ investment preferences during March-April 1992 and found that the extent of diversification in the case of share investment does not show any significant change between 1990 and 1992.

L.C. Gupta (1991) analyzed 5822 profiles of Indian households in mid-1990 and found one-fourth of the Indian shareowners had shares of only 1 or 2 companies, and slightly above half of them had no more than 5 companies in their share portfolio. Thus, the extent of diversification of share investment was grossly inadequate in the case of the majority of Indian shareowners, exposing them to considerable ‘unsystematic’ risk. He found that holders of undiversified or inadequately diversified portfolios had a higher proportion of those who reported unsatisfactory experience compared to holders of more diversified portfolios.

Jonas Agell and Per-Anders Edin (1990) studied the portfolio allocation among 8 asset categories using 1979 Swedish yearly income distribution survey (HINK), which consisted of 1943 wage earning households. They found that wealth, occupation, marginal income taxes had strong positive effects on ownership of different asset categories in the household portfolio choice. They also found the significant positive impact of age, education, occupation, retirement status of the head of the household in the proportion of various assets in their portfolio.

James Banks and Sarah Tanner (1980) surveyed the UK households and concluded their findings. As the late 1980s saw a dramatic fall in personal saving rates in Britain and the United States, which attracted the attention of
academics and policy-makers alike. The period was also marked by a number of important structural changes, any or all of which could have had an impact of personal saving behaviour. Included among these were systematic changes in the demographic structure of the population, female labor supply, productivity growth, financial liberalization and the degree of inequality in household incomes. These changes, coupled with the decline in personal saving, led many commentators to pronounce that the ‘baby-boom’ generation (i.e. those currently middle-aged) were not saving enough for their retirement which is a concern heightened by growing fears over the future of the state pension system, given current social and political attitudes.

Harry Markowitz (1952), in 1952, Harry Markowitz introduced the modern investment age with his landmark work on building optimal portfolios through diversification and mean-variance analysis. He explained his theory in a *Journal of Finance* article titled “Portfolio Selection,” published in 1952. His theory emphasized making investment decisions based on risk, evaluating investment performance at the portfolio level, eliminating specific stock risk through diversification, and holding assets that are not highly correlated. Markowitz constructed a theoretical “efficient frontier” where a set of optimal portfolios offer the best level of return for a given amount of risk, or the lowest level of risk for an expected return. The investor should choose a portfolio based on the amount of risk he is willing to take, and then identify this diversified portfolio on the curve. He explained the fundamental concept of Modern Portfolio Theory (MPT). That the assets in an investment portfolio can not be selected individually on their own merits. Rather, it is important to consider how each asset changes in price relative to how every other asset in the portfolio changes in price; Investing is a trade off between risk and return.
2.3 Gaps in Research

The main issues seen in the literature in the context of individual investor and household portfolios were availability of opportunities for the investments, financial awareness, planning for retirement income, risks etc. While in developed countries, the issues were mainly related to longevity risk, need for annuitization and low annuitization rates besides the impact of income and financial knowledge or planning for retirement income. In case of a developing country like India, the concern was low-income levels and lack of financial knowledge besides issues related to access to alternative instruments.

Most of the studies discussed in this section either analyzed the factors influencing the ownership of risky assets or the amount of investments made in risky assets. Only few studies have analyzed the factors influencing the ownership and proportion of risky assets on total assets. Investors take two-stage decisions in portfolio formation, in the first stage. The household decides about the combination of assets in their portfolio (the discrete portfolio choice). In the second stage they decide about how much to invest in different assets (the continuous portfolio choice).

To broadly categorize and analyzing gaps here, it would be justified to state that the existing studies are inadequate to find out if at all there has been any change in the investment pattern or portfolio preferences of the Investors in a country that has undergone economic and financial reforms in recent times. Early researchers examined how people invest the assets they do have control over. One important fact is that this is a relatively new field, and a great deal has been taken by the researchers to understand this unexplored area, but more remained to be learned. Researchers are severely handicapped because they lacked good data on household asset accumulation patterns and asset holdings as well as other pertinent information about preferences and constraints. Studies are ongoing in the USA, to identify various avenues of investments available for
the households. None has been done in the setting of a developing country. Effects of reforms in an expanding economy are usually viewed at macro level, but then to view them at micro level with primary data has seldom been attempted. In order to fulfill this huge gap the present research is an attempt to study the household investment behavior in India, in terms of composition, determinants, motives of investment and factors affecting their investments.

The literature on investors' behavior from various countries such as the UK, US, Japan, and European countries like Netherlands, France, Sweden and India were reviewed. The findings of the studies were summarized across various countries. In Italy education had a positive impact on the ownership and the proportion of risky assets in total wealth, while age had a hump shaped profile. While in Germany, age had a hump shaped profile and education had a positive impact on the ownership of risky assets. In the United Kingdom age had a hump shaped profile, while education and marginal tax rate had a positive impact on the ownership of risky assets.

In Sweden, income and marginal tax had a positive impact on the ownership of risky assets. Age and education had a positive impact on the proportion of risky assets in the total wealth. In the case of occupation, white-collar household head had a positive relationship with both the ownership of risky assets and the proportion of risky assets in the total wealth when compared to the rest of the respondents.

In the USA income, education and marginal tax rate had a positive relationship with both the ownership of risky assets and the proportion of risky assets in the total wealth. Defined benefit pension plan and home ownership had a positive impact on the ownership of risky assets, while age had a negative
impact on it. Household size had a negative impact and age a hump shaped profile on the proportion of risky assets in the total wealth.

In South Korea income had a positive impact on the proportion of risky assets in the total wealth.

In India, age had a negative impact and education a positive impact on the ownership of risky assets. The life cycle stage of the investors was found to have an impact on the size of the investments made in risky assets. The findings of the few Indian studies were in line with the findings of European and the US studies, in case of the variables:

Age and education in the ownership of risky assets and the life cycle stage in case of proportion of risky assets in the total wealth.

Three facts emerged from the empirical surveys of composition of household portfolios. Firstly, it was immediately evident that the portfolios of different households were surprisingly diverse. Portfolios differ by wealth, by the country in which the household lives, and by various household characteristics such as the age, education and birth years of the members. Secondly, in all countries, the average household’s portfolio was typically invested mainly in safe or in only slightly risky assets, once residential housing is excluded. These low-risk assets might include bank accounts, such as savings and checking accounts, time deposits, and life insurance. This was even true in the US and the UK, where stockholding was traditionally high, but it was especially true in other countries. Finally, most households appeared to keep their portfolios very simple, with fewer than five different assets or accounts, despite the tremendous proliferation of different asset types in the 1990’s. The modal number of
household assets in the US in 1998, for example, Bertaut and Starr-McCluer, 2002)\textsuperscript{iii} Although very few asset surveys included the implicit value of state benefits such as old age pensions and medical insurance, it was probably fair to say that almost all families in developed countries have a large proportion of their wealth in these benefits.

Thus, age, income, education, occupation, homeownership, household size, marginal tax rate and pension benefit status are the factors found to have had its impact on the household portfolio.

\section*{2.4 Implications of Literature Review}

On detailed deliberations on the reviewed literature, and the above conclusion, the following implications were identified.

1. Systematic objectives formation became possible.
2. Certain terms were better defined through a reduction in ambiguity.
3. Ambiguities in methodology and design were reduced.
4. More appropriate interpretation of data became possible.

\section*{2.5 SUMMARY:}

In this presentation of literature review through Journals, Magazines, Books and Websites of economics and financial management, investor behaviour in particular, an understanding was developed about the problem identification, sample selection, tools of study and methods of data analysis and inferences etc.
A Study of “Investors’ Behaviour in Financial Market”

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Alok Kurnar and Charles M. C. Lee (1997) has conducted a research on “Retail Investor Sentiment and Return Co- movements” research paper published in 1997


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