Investment behaviour of Indian Investors: Gender Biasness

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Abstract:

There are number of studies which favour the existence of gender biasness in investment patterns. Most of the studies conclude that women invest more conservatively than men (Yao, R. & Hanna, S.D., 2005) and that the women are more risk averse (Julie R. Agnew, 2005). Some studies also contend that women are less confident about their investment decisions and earn less return in compare to men (Barber B and Odean T., 2001). In this context, this paper aims to study whether these gender differences really exist in India. Using NCAER household survey report, the paper examined the household investing and saving patterns of Indian investors. The gender difference has been studied in terms of their risk tolerance *viz* their risk bearing capacity, risk perception *i.e.* how they assume risk within different constraints, time horizon for investment, preference for investment alternatives among the vast number of alternatives available in the Indian capital market etc. We also examined the factors which influence the investment behaviour of women such as age, level of education, their marital status, income, dependency etc.

JEL Classification: J16, G11, G23

Keywords: Gender Difference, Risk perception, Investment Behaviour, Women Investment.

Introduction:

After the global financial crisis of 2008 and 2009, the Indian financial sector has now emerged stronger. The investments and savings are increasing in terms of volumes and number of investors. As the number of investors is increasing, the most common discussion based on gender biasness again becomes the interest of investors. There are number of studies, which have shown that the financial behaviour of men and women differ significantly. Women hold low risk tolerance i.e. are more risk averse than men and also sometimes earns less returns from their investments. Except this, women invest more conservatively their financial resources and have shows low confidence regarding their financial behaviour. In this paper we are studying the investment behaviour of individuals, residing in the territory of India, dividing them in the strata of male and female with reference to their preference for investment alternative, their risk behaviour, the level of confidence regarding their financial decisions, the factors which influence their behaviour, etc.

Literature Review:

There are number of studies available, which have discussed the difference in financial behaviour of male and female investors and the factors which influence this behaviour. Researchers like Suden *et al.*(1998) Julie R. Agnew (2005), Perrin (2007), Oslen and Cox(2001), Schmidt & Sevak (2006) shows that women are more risk averse then men in general and this defines their choice of less risky assets in their portfolios.

Except this, Guiso, Jappelli and Terlizzese (1996), Bajtelsmit and VanDerhei (1997), Hariharan, Chapman and Domain (2000), Hartog, Ferrer-I-Carbonell and Jonker (2002) concluded that males are more risk tolerant than females. Powell & Ansic (1997) find that men have significantly higher preference for risk than women. Males prefer "riskier" investment strategies in order to achieve the highest gains, while women select "safer" strategies that allow them avoiding the worst possible losses [Odean (1998), Barber and Odean (2001), Benartzi and Thaler (2001), Gervais and Odean (2001), and Daniel and Huberman (2003)]. Graham (2002) found that women have less confidence regarding their decision related to financial issues.

Fellner & Maciejovsky (2007) reveal a systematic correlation between gender and risk attitudes. Further Fellner & Maciejovsky (2007) find that women prefer less volatile investments and exhibit lower market activity, e.g. they submit fewer offers and engage less often in trades.

Women give a lot of priority and importance to the advices given by Financial Advisors (FA) and depend on them for guidance than men. Female investors are more detail oriented; and want to read more and understand financial matters better and they ask more questions than male clients (Worley, 1998).

Jianakoplos & Bernasek (1998) test gender differences in investment behaviour on a large data set drawn from the Survey of Consumer Finances (CFS) 1989. The analysis reveals that single women are relatively more risk averse than single men or married couples.

Some studies concluded that since women earn less compare to men, they have lower wealth accumulation and hence lower investment and saving rates [Blau & Kahn (2000), Moore & Shierholz (2004), O'Neill (2003)].

In India there are very few studies which have presented these gender gaps. Madhusoodanan (1997) suggested that risk tolerance serves as an illusion of control and thus overconfidence. Somasundaram (1998) concluded that the investors of Coimbatore prefer the bank and chit fund deposits to save. Mutual funds are the least preferred instrument for investment. Rajarajan (2003) and Shobhana and Jayalaxmi (2005) bought out the fact that there is a strong association between the demographic factors and the risk tolerance of the investors. Sharma and Sharma (2004) pointed out that the retail investment activity in India is very low. However the young generation of Jammu holds a positive attitude towards the stock market with moderate belief. Rajarajen (2010) revealed that the population of Indian investors have increased in the recent years. Similarly, the surveys organised by government bodies such as NCAER, RBI Survey talk about the individual investor's investment and saving behaviour. In the same line, Hira and Mugenda (2000) state that an advisor needs to understand the factors that underlie a client's financial behaviours before they can effectively advise them, and numerous studies have shown that men and women think and behave differently when it comes to managing money.

However there exist some studies exist which denies the existence of any gender gap. For example Schubert et al. (1999) find no influence of gender on financial decisions. Masters and Meier (1988) found no difference in the risk taking propensity of male and female entrepreneurs.

Research Methodology:

Formulation of Hypotheses: Hypotheses are formulated considering '*no difference'* exists in the investment behaviour among Male and Female investors.

Ho: There will be no difference between male and female households with regard to:

- *The preferred investment alternative*
- *The amount allocated to investments*
- *The time horizon for investments*
- *The relative risk aversion*
- *The risk tolerance*
- *The perception of risk*
- *The level of confidence*

- *The use of windfall income*
- *The portfolio diversification strategy*
- *The importance of expert's advice*
- *The factors influencing the investment in capital market*

Sample:

The data set used in this study is the 2011 Survey of National Council of Applied Economic Research, titled "How Household Invest: Evidence from NCAER Household Survey" sponsored by Securities Exchange Board o India (SEBI).

The household is the basic unit of analysis in the study. The survey was conducted in 52 major states/ Union Territories of India. The sample size is 38,412.

Chi square test is used for analyze the formulated hypotheses with the help of SPSS 21.0 package.

Data Analysis:

Table 1 represents the summarised data which is given in NCAER survey report. However we have summarized the data as per our requirements. We have worked on the following 11 parameters:

Parameter 1: Investment Preference :- As per the survey, assuming a level of risk aversion and information asymmetry, **investment preference** shows how a rupee of surplus income has been allocated across various investment options by the households. We find that mutual funds constitute the single largest allocation by male(40.75%) and female (41.63%) compared to all other options. Since mutual funds provide returns that are in general greater than market returns and expose investing households to risks that are lower than the market risks, Both male and female households prefer this medium over retail investing. Retail investing is "costlier" in terms of time and information as well as the variability of returns. This explains why a mere 21.38 percent (male) and 19.23 percent (female) of all households prefer to invest in the secondary market. Other choices such as derivatives and bonds are even less preferred by male investors. However it is noticeable that female investors are more interested in derivatives.

Parameter 2: Level of Investment:- Report shows that men and women invest almost same amount.

Parameter 3: Time Horizon: - This shows the relationship between gender and time horizon for investment. It is interesting to know that women are involved in more speculative behaviour when compared to men.

Parameter 4: Relative Risk Aversion:- The relative risk aversion (risk tolerance) of a household has been captured using a risk scale, which can be defined as;

$$r_i = \frac{RA_i}{TA_i}$$

$$i = 1,2,3,4......N$$

$r_i \longrightarrow \mathrm{C}$ Reflects that household is risk averse

$r_i \longrightarrow 1,$ Reflects that household tolerate risk

where *ri* is the proportion of risky assets, *RAi* is asset holdings with some degree of risk, Tai is total asset holdings, *i* is the household. The risk scale reflects the proportion of risky assets in an investor's portfolio. The numerator of this ratio is the value of investments in risky assets and the denominator is the total value of financial wealth. The risk scale is bounded between 0 and 1. We divide the risk scale into four categories, viz., less than equal to 0.25, greater than 0.25 but less than equal to 0.50, greater than 0.50 but less than equal to 0.75 and, greater than 0.75. The degrees of the risk tolerance scale are in increasing order from 0 to 1. The study shows that most of the investors are risk averse. Here also, women involve in less risky behaviour.

Parameter:5: Risk Tolerance:- The self-perception of households with respect to their willingness to take risk is examined using the following neutral statement:

Which of the following statements is true for you? Willingness to take substantial financial risks/ Willingness to take above-average financial risks, expecting to get above average financial returns/ Willingness to take average financial risks, expecting to get average financial returns/ Not willing to take any financial risks.

The findings are consistent with the findings of Parameter 4 i.e. majority of investors either men or women are low risk taker.

Parameter 6: Confidence Level:- NCAER used the following vignette to judge the level of confidence:

"You have saved money for a "world tour" that you were looking forward to for a long time. A month before you plan to leave, you lose your job. You would: [Very low level of confidence=Cancel the trip; Low level of confidence=Take a shorter vacation; High level of Confidence=Go as scheduled, reasoning that you will use that time to prepare for a job search; Very High level of Confidence=Extend your vacation, because this might be your only chance for such a trip]".

The responses are not in the line of previous studies which say that women are less confident. Table1 shows the less confident behaviour of men.

Parameter7: Use of Windfall Income:- Windfall gains are unexpected increase in income. One would expect such unexpected income to be used for relatively risky ventures. The following vignette is used to know the behaviour of households:

"If you unexpectedly receive ` 50,000, what would you do? [Saving Only=Deposit it in a bank account; Invest in risk free securities =Invest in high-quality govt. bonds; Invest in securities having moderate risk=Invest in mutual funds; Invest in securities having high risk=Invest in stocks; No saving or investment=Spend it]".

Responses shows men and women show the same attitude towards the use of windfall income and prefer to save it.

Parameter 8: Definition of risk:- This was the simply asked question the option mentioned in table 1 under parameter 8. Investors take it as the uncertainty of returns.

Parameter 9: Portfolio Diversification:- This parameter discussed the portfolio diversification strategy adopted by me and women. Table 1 show that women consist more risky securities in their portfolio.

Parameter 10: Expert Advice: - Basically this parameter shows the herd behaviour of investors. The following vignette is used to know the herd behaviour of households:

"Some experts are predicting that the prices of assets such as gold, jewels, collectibles, and real estate (hard assets) will increase in value; bond prices may fall. However, experts have advised you that government bonds are relatively safe. Most of your investments are currently in high-interest government bonds. What would you do? [Truther=Hold the bonds; Liberal=Sell the bonds, put half the proceeds into the stock market, and the other half into assets such as land; Free Thinker=Sell the bonds and put all the money into buying land and precious metals; Contrarian=Sell the bonds and put all the money into buying assets like land and borrow additional money to buy more assets such as land]"

The study shows that when it comes to follow the advice of experts, both male and female shows the little bit influence of expert's advice.

Parameter 11: Factors influencing the investment in the stock market:- As per the NCAER survey report, women invest less in stock market because of their resource constraints whereas men invest less because they don't know about the investment options.

Table:1

S. No.	Parameters of Study	Men	Women
1.	**Investment Preference**		
	Mutual Fund	40.75	41.63
	Bond Only	15.09	14.79
	Debenture Only	8.68	6.74
	IPO Only	8.71	4.51
	Secondary Market Only	21.38	19.23
	Derivatives Only	5.4	13.71
2.	**Level of Investment**		
	Lowest	19.89	21.7
	IInd Quintile	19.91	20.69
	IIIrd Quintile	20.01	19.94
	IVth Quintile	20.47	16.58
	Highest	19.71	21.09
3.	**Preferred Time Horizon for Investments**		
	Upto 3 years	33.68	37.98
	3 to 5 years	32.23	33.99
	More than 5 years	34.08	28.03
4.	***Relative Risk Aversion**		
	< 0.25	49.22	53.32
	0.25 - 0.50	14.06	16.04
	0.5 - 0.75	16.91	16.94
	> 0.75	19.81	13.69
5.	**Risk Tolerance**		
	No Risk Taker	39.55	36.38
	Moderate Risk Taker	20.9	24.09
	High Risk Taker	17.76	21.32
	Substantially High Risk Taker	21.78	18.21
6.	**Confidence Level**		
	Very Low	32.62	23.99

	Low	36.24	44.32
	High	24.55	23.99
	Very High	7.59	7.69
7.	**Use of Windfall Income**		
	Only Saving	31.39	31.79
	invest in risk free securities	23.49	23.48
	invest in securities having moderate risk	20.3	23.48
	invest in securities having high risk	13.88	11.83
	no saving or investment	10.95	9.43
8.	**Risk Definition**		
	Loss	22.13	23.82
	Uncertainty of Returns	42.43	42.36
	Opportunity for Significant Return	27.32	24.91
	Thrill	8.11	8.91
9.	**Portfolio Diversification**		
	60% in Low Risk, 30% in Medium Risk and 10 % in High Risk	27.71	22.45
	30% in Low Risk, 40% in Medium Risk and 30 % in High Risk	50.61	52.5
	10% in Low Risk, 40% in Medium Risk and 50 % in High Risk	21.68	25.05
10.	**Following the Experts**		
	Truther	25.28	26.74
	Liberal	26.65	24.54
	Free thinker	27.09	29.3
	Contrarian	20.98	19.41
11.	**Factors affecting the investment in capital market**		
	Returns	5.07	3.22
	Surety of Returns	13.6	12.22
	Liquidity	8.23	8.08
	Information about instruments	26.85	22.24
	Knowledge	14.27	16.38

	Role of Regulator	6.19	7.73
	Financial Resources	25.81	30.15

Interpretation:

- The above discussed parameters are the basis of our study to know if there is any difference in regarding the financial behaviour of male and female households. As mentioned above the null hypotheses are tested with the help of Pearson Chi- Square Test using SPSS 21.0. The Chi –square test is done at the significant level of 5%, i.e. calculated p-value is compared with 0.05. Table 2 shows that p – value is higher than the level of significant for all the parameters i.e. p> 0.05, hence all the null hypotheses are accepted. This means there is no significance difference among the male and female households with regard to the preferred investment alternative, the amount allocated to investments, the time horizon for investments, the relative risk aversion, the risk tolerance, the perception of risk, the level of confidence, the use of windfall income, the portfolio diversification strategy, the importance of expert's advice and the factors influencing the investment in capital market.

Table:2

S. No.	Parameters	Chi-square	p-value	df	Critical value	Decision
1.	Investment Preference	5.056	0.409	5	11.07	Accepted
2.	Level of Investment	0.382	0.984	4	9.488	Accepted
3.	Preferred Time Horizon for Investments	0.863	0.649	2	5.991	Accepted
4.	Relative Risk Aversion	1.349	0.718	3	7.815	Accepted
5.	Risk Tolerance	1.021	0.796	3	7.815	Accepted
6.	Confidence Level	2.222	0.528	3	7.815	Accepted
7.	Use of Windfall Income	0.579	0.965	4	9.488	Accepted
8.	Risk Definition	0.218	0.975	3	7.815	Accepted
9.	Portfolio Diversification	0.945	0.623	2	5.991	Accepted
10.	Following the Experts	0.325	0.955	3	7.815	Accepted
11.	Factors affecting the investment in capital market	1.864	0.932	6	12.592	Accepted

Conclusion:

As the position of women is changing day by day, now women are also having a strong profile in the society. Now she is playing a role of not only a homemaker, but also dealing with high valued decisions including financial decisions at par with men. The above discussion shows that the decisions taken by the women are not different from the decisions taken by men. This result is however not in the line of previous studies which say that the financial behaviour of men and women have a significant difference. The reason may be the recent financial turmoil due to which a significant change has occurred in the investment activities of both men and women.

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