GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

A STUDY ON RISK PERCEPTION OF RESPONDENTS TOWARDS DIFFERENT INVESTMENT AVENUES

Dr. Disha A. Popat

Incharge Principal
Chaudhari Commerce College
Gujarat University
Gandhinagar
drdisha2407@gmail.com
(M) 9726636668

Abstract

Decision making is crucial process and it requires too much analysis to come for the final decision. In the world of uncertainties, people are juggling with their future financial wellbeing and it requires too much time, efforts and knowledge for such decision making. Apart from that it is all about the perception of people towards any options given to them. Hence, a survey has been conducted to know financial literacy level of people from Gandhinagar district and their perception about risk associated with any investment avenues using structured questionnaire which was further analyzed with the help of tables, pie chart, graphs and discriminant analysis.

Keywords: *Financial Literacy, Financial Decisions, Investment Avenues, Risk Perception*

INTRODUCTION

Out of all decisions, financial decision making is one of the crucial problems. Apart from educational qualification, it is financial literacy which plays major role in financial decision making for future wellbeing of individual. Financial literacy is combination of financial attitude, financial awareness and financial knowledge. (OECD Report).

Other than financial literacy, many other factors like demographic profile, risk and return associated with different investment avenues, financial scenario at globe, current national economic policy, tips from investors etc. have role to play in one's mind when it comes to financial decision making. One can manipulate data and figures but cannot play with perception of any person towards any financial products. Here, an attempt has been made to classify respondents as per their financial literacy level and per the risk bearing capacity. Perception of respondents towards different investment avenues plays an important role in making final decision hence in depth study is required in this direction.

LITERATURE REVIEW

To understand the question raised and for further analysis, previous researches were reviewed which are as follows,

- **Bashir & Nisar, 2013** examined the impact of accounting information, financial literacy and expected return on the short-term investment decision making of the 110 stock market investors which was further analyzed through T test and R square test and resulted that all these factors have significant effect on the short term investment decision making. They also concluded with the results that individual investors with superior experience have more intention for short term investment as compare to the investors with some other experience level.
- **Kher & Shende, 2013** examined how central employees' investment choices shifted before and after the 6th pay commission. Using a sample of 100 respondents from four departments via judgment sampling, it found that initially preferring safe investments, employees later diversified into riskier options like stocks and real estate post-commission. Analysis using mean, median, mode, and correlation underscored this change, revealing a broader investment strategy influenced by the pay commission's effects.
- **Sudha et al., 2014** has conducted research to know the level of awareness about various investment methods, factors effecting gold purchase and awareness about Gold and Jewellery in Pattukkottai area with 75 samples. Collected data were analysed through percentage analysis and Chi-Square analysis. They concluded research and found that the investment decisions are driven by the income of the family, economic conditions, different risk, returns and tax consideration while taking investment decision and were of diverse in nature.
- **Bhushan, 2014** examined how financial literacy influences both awareness of financial products and investment behavior among 516 salaried individuals. Using t-tests and Chi-square tests for analysis, the study revealed that individuals with higher financial literacy demonstrate greater awareness of financial products.

GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

These individuals are more likely to invest in high-risk, high-return financial products compared to their counterparts with lower financial literacy, who tend to prefer safer, traditional investments.

- **Awais et al., 2016** determined the impact of financial literacy and investment experience on risk tolerance and investment decision from investors from Pakistan which concluded that high level of knowledge and increased financial literacy will encourage investors to take more risky decision who may have portfolio of good and bad experience.
- **Arunkumar & Babu, 2018** studied Socio Economic Profile and Investment Risk Perception of Salaried Employees by collecting responses from 100 government employees through structured questionnaire. Statistical tools T test and ANOVA were used and found that the female respondents were willing to take more risk in investment decisions than male respondents and income level played major role in the willingness to take risk.
- **Ahmed et al., 2021** in their research shows financial literacy boosts investment decision-making and risk tolerance among PSX investors. Previous research supports its impact on various financial activities and risk perception. Financial risk tolerance mediates the link between financial literacy and investment behavior, highlighting its crucial role in shaping investor decisions in the stock market.
- **Khan et al., 2023** explores in Delhi/NCR, Covid-19 and fintech impacts on financial decisions and well-being using PLS-SEM with 512 respondents. It finds digital financial literacy directly influences both outcomes. Financial autonomy and capability mediate these relationships, while impulsivity does not affect decision-making. The findings suggest policy and educational enhancements to promote financial resilience and gender-specific economic empowerment.

There are so many factors which affects the investment decision of any individual, hence, here the study has been carried out to identify the effect of risk perception towards different investment avenues on the basis of their risk bearing capacity.

RESEARCH METHODOLOGY

Data has been collected through well-structured questionnaire on the basis of pre decided occupational quota of rural and urban area of Gandhinagar. Out of 1000 questionnaires, 675 were found complete and was further taken for analysis using different statistical tools like tables, pie chart, graph and discriminant analysis..

Objectives:

Research has been carried out on the basis of following objectives.

- To know financial literacy level of people from Gandhinagar district
- To classify respondents as per their risk bearing capacity with reference to their risk perception towards investment avenues.

DATA ANALYSIS AND INTERPRETATION

(I) Financial Literacy Level of Respondents from Gandhinagar District

Financial Literacy was measured on the basis of definition given in OECD reports by considering financial knowledge, financial behaviour and financial attitude of respondents' towards different financial matters of selected respondents which were further divided into 3 categories on the basis of their Financial Literacy Score.

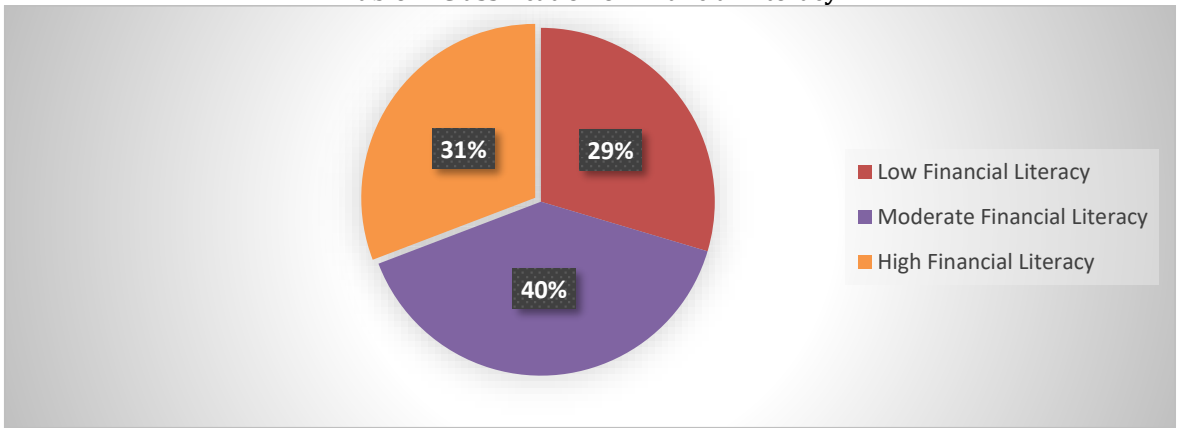
Where,

Less than 30 Financial Literacy Score= Low Financial Literacy

30-60 Financial Literacy Score= Moderate Financial Literacy

More than 60 Financial Literacy Score= High Financial Literacy

Table 1: Classification of Financial Literacy



GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

Financial literacy among 675 Investors is measured through 3 categories and found that 267 investors belong to moderate financial literacy category which is highest among all other categories.

To evaluate the perception of respondents towards risk associated with different investment attributes, perception of respondents were classified by risk bearing capacity of respondents into high risk takers, moderate risk takers and low risk takers.

(II) Classification of Respondents as per their Risk Bearing Capacity with Reference to their Risk Perception towards Different Investment Avenues

Three groups of risk takers (high, moderate and low) are to be compared on the basis of risk perception towards seventeen different investment avenues and their mean values and C.V. are to be compared to get idea about their differences in mean score. Following table represents the mean score of three groups of risk takers.

Where,

Mathematical form of discriminant analysis model is:

$\mathbf{Y=b_0+b_1X_1+ b_2X_2+ b_3X_3.....+ b_kX_k}$

Y=Dependent variable= categories of risk takers

(1= High risk takers, 2= moderate risk takers, 3= low risk takers)

Independent variables (X_s) = Risk perception towards different investment avenues

$\mathbf{b_s}$ = Coefficient of Independent variable

Table 2: Group Statistics

Variables	Mean	S.D	C.V.
Post Office	1.51	1.24	81.97
Equity Shares	**2.58**	1.99	77.01
Preference Shares	2.05	1.85	90.63
Debentures	1.74	1.71	98.15
IPOs	1.88	1.79	95.10
Insurance Policy	1.88	1.38	73.29
Mutual funds	2.15	1.65	76.69
Saving Account	1.59	1.36	85.60
Fixed Deposit	1.51	1.34	88.87
PPF)	**1.27**	1.34	**105.55**
Bond	1.70	1.62	95.53
Gold, Silver, Diamond	2.38	1.69	**71.06**
Real Estate	2.26	1.63	72.04
Kisan Vikas Patra	1.50	1.40	93.07
National Saving Certificate	1.32	1.35	101.84
Commodity Market	2.19	1.98	90.53
Forex Market	2.31	2.07	89.36

The highest mean score corresponds to variable equity shares which is 2.58 and least mean score to PPF with 1.27 mean score. In case of risk perception of respondents regarding different investment avenues, lowest coefficient of variation (C.V.) is found for Gold, Silver and Diamond with 71.06 shows consistent responses whereas PPF is highly inconsistent avenues with 105.55 C.V.

To know for which investment avenues significant difference between mean risk perceptions scores of respondents exists, a one way ANOVA is carried out considering each Investment avenue as a dependent variable and risk perception level as Independent variable.

Table 3: Test of Equality of Grouped Means

Variables	Wilks' Lambda	F	df_1	df_2	Sig.
Post office	0.999	0.182	2	672	0.834
Equity Shares	0.987	4.417	2	672	**0.012**
Preference shares	0.988	3.914	2	672	0.020
Debentures	0.993	2.232	2	672	0.108
IPOs	0.967	11.531	2	672	**0.000**
Insurance policy	0.992	2.759	2	672	0.064
Mutual funds	0.989	3.834	2	672	**0.022**
Saving account	0.996	1.314	2	672	0.269
Fixed deposit	0.999	0.497	2	672	0.609
PPF	0.996	1.420	2	672	0.242
Bond	0.988	4.014	2	672	**0.019**
Gold, silver, Diamond	0.990	3.421	2	672	**0.033**

GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

Real Estate	0.998	0.542	2	672	0.582
KisanVikas Patra	0.995	1.682	2	672	0.187
National Saving Certificate	0.995	1.622	2	672	0.198
Commodity market	0.967	11.511	2	672	0.000
Forex Market	0.966	11.854	2	672	0.000

Among different investment avenues, Risk perception of respondents regarding Equity shares, Mutual Funds, IPOs, Bond and Silver, Gold, Diamond shows lower p value at 5% significance level which shows significant difference in mean risk perception scores of respondents. In remaining investment avenues, p value is more than 0.05 which shows no insignificant difference between mean of two groups.

Table 4: Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	0.086	67.7	67.7	0.281
2	0.041	32.3	100.0	0.199
a. First 2 canonical discriminant functions were used in the analysis.				

The last column of the above table indicates canonical correlation, which is the simple correlation coefficient between the discriminant score and their corresponding group membership (High risk taker, moderate risk takers and low risk takers). The value of this for function 1 is 0.281, the square of canonical correlation is $(0.281)^2$= 0.078961, which means 7.90% of the variance in the discriminating model between high risk takers, Moderate risk takers and low risk takers is due to the changes in the seventeen predictor variables.

Table 5: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	0.884	81.595	34	0
2	0.96	26.778	16	0.044

Combined Wilks' Lambda for all seventeen investment avenues has been calculated and value of Wilks' Lambda given by SPSS for function 1 is 0.884 and for function 2 it is 0.96. The Wilks' Lambda takes the value between 0 and 1 and lower the value of Wilks' Lambda, the higher is the significance of the discriminant function. Therefore, 0 (zero) value would be the most preferred one. The statistical test of significance for Wilks' Lambda is carried out with the Chi- Squared transformed statistic. In the above case Chi Square is 81.595 with 34 degrees of freedom and p value of 0 in case of function-1 and for function-2, Chi Squared transformed statistic is 0.96 with 16 degrees and p value of 0.044. Since the p value is less than 0.05 for both the functions, the assumed level of significance, it is inferred that the discriminant function is significant and can be used for further interpretation of the results.

The coefficients of unstandardized discriminant function depend upon the units of measurement whereas the coefficients of standardized discriminant function are independent of the units of measurements. Standardized coefficients are given below.

Table 6: Standardized Canonical Discriminant Function Coefficients

Variables	Function	
	1	**2**
Post Office	-0.213	-0.344
Equity Shares	0.204	0.065
Preference Shares	**-0.693**	**0.738**
Debentures	0.039	-0.532
IPOs	0.612	-0.145
Insurance Policy	-0.473	0.157
Mutual Funds	**0.012**	0.08
Saving Account	0.264	0.574
Fixed Deposit	0.096	**-0.055**
PPF	0.124	-0.573
Bond	-0.19	0.609
Gold, Silver, Diamond	0.318	0.141
Real Estate	-0.147	-0.402
Kisan Vikas Patra	-0.055	0.556
National Saving Certificate	0.03	-0.326
Commodity Market	0.216	0.385
Forex Market	0.357	-0.131

The absolute values of the coefficients in standardized discriminant function indicate the relative contribution of the variables in discriminating between the groups. The table above indicates that in function 1, preference

GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

shares is the most important avenue which discriminates between the type of risk takers and mutual funds being the lowest important avenue. In function 2 also, preference shares is the important avenue followed by other avenues and Fixed deposits being the lowest important avenue.

Table 7: Canonical Discriminant Function Coefficients

Variables	Function	
	1	2
Post Office	-0.172	-0.278
Equity Shares	0.103	0.033
Preference Shares	-0.376	0.400
Debentures	0.023	-0.312
IPOs	0.348	-0.082
Insurance Policy	-0.343	0.114
Mutual Funds	0.007	0.049
Saving Account	0.195	0.422
Fixed Deposit	0.071	-0.041
PPF	0.093	-0.430
Bond	-0.118	0.378
Gold, Silver, Diamond	0.189	0.084
Real Estate	-0.090	-0.247
Kisan Vikas Patra	-0.039	0.397
National Saving Certificate	0.022	-0.242
Commodity Market	0.111	0.198
Forex Market	0.176	-0.064
(Constant)	-0.498	-1.013
Unstandardized coefficients		

From the estimated unstandardized coefficients, function 1 and function 2 has been derived, both the function can be written as follows.

$Y=-0.498-0.172X_1+0.103X_2-0.376X_3+0.023X_4+0.348X_5-0.343X_6 +0.007X_7 +0.195X_8 + 0.071X_9 +0.093X_{10} - 0.118X_{11}+0.189X_{12}-0.090X_{13}-0.039X_{14}+0.022X_{15}+0.111X_{16}+0.176X_{17}$

$Y=-0.013-0.278X_1+0.033X_2+0.400X_3-0.312X_4-0.082X_5 +0.114X_6+ 0.049X_7+ 0.422X_8-0.041X_9- 0.430X_{10}+0.378X_{11}+0.084X_{12}-0.247X_{13}+0.397X_{14}-0.242X_{15}+ 0.198X_{16}-0.064X_{17}$

Table 8: Classification Results

		Type of Risk Taker	Predicted Group Membership			Total
			High Risk	Moderate Risk	Low Risk	
Original	Count	High Risk taker	62	30	35	127
		Moderate Risk taker	52	100	54	206
		Low Risk taker	91	96	155	342
	%	High Risk taker	**48.8**	23.6	27.6	100.0
		Moderate Risk taker	25.2	**48.5**	26.2	100.0
		Low Risk taker	26.6	28.1	**45.3**	100.0
Cross-validated[b]	Count	High Risk taker	53	37	37	127
		Moderate Risk taker	56	93	57	206
		Low Risk taker	97	101	144	342
	%	High Risk	41.7	29.1	29.1	100.0
		Moderate Risk	27.2	45.1	27.7	100.0
		Low Risk	28.4	29.5	42.1	100.0
a. **47.0% of** original grouped cases correctly classified. (syno)						
b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.						
c. 43.0% of cross-validated grouped cases correctly classified.						

The classification accuracy can be obtained by calculating Hit ratio. Here, the discriminant score is computed for all 675 respondents. If this score is more than zero than it can be said that individual is correctly classified. Above table classifies each respondent into High risk taker, Moderate risk taker and Low risk taker. This table is also called confusion matrix or classification table. Out of 675 respondents, 48.8% high risk takers are classified correctly, 48.5% moderate risk takers are classified correctly and 45.3% low risk takers are classified correctly.

GAP iNTERDISCIPLINARITIES
A Global Journal of Interdisciplinary Studies
(ISSN – 2581-5628)
Impact Factor: SJIF - 5.363, IIFS - 4.875
Globally peer-reviewed and open access journal.

It may be seen from the above table that 62 out of 127 high risk takers, cases are correctly classified, 100 out of 206 moderate risk takers and 155 out of 342 low risk takers are correctly classified.

$$Hit\ Ratio = \frac{Number\ of\ Currect\ predications}{Total\ Number\ of\ Cases}$$

= 62+100+155= 317/675= 46.96% i.e. 47%

In this case, 317 correct positions out of 675; therefore the hit ratio works out to be resulting into 47% correctly classified cases. In the above table it can be observed that after cross validation there is a change of 5%, which is 43%.

FINDINGS & SUGGESTIONS

Majority of respondents had moderate financial literacy which may have direct impact on their financial decision making. When it comes to classification of respondents, majority of them are moderate risk takers which shows safety is also one of the most important factor while taking any financial decisions. But when it comes to decision making, perception regarding risk associated with any investment avenues plays important role. Here it is arrived that, perception about gold, silver and diamond is consistent, but perception is very inconsistent when it comes to PPF. When it comes to consistency within the same group, risk perception for different investment avenues like Equity shares, Mutual Funds, IPOs, Bond and Silver, Gold, Diamond is very different. Main discriminating variable among different investment avenues is perception for preference shares whereas PPF and mutual funds is the least discriminating factor. Thus, it can be said that, perception of individual is dependent on capacity of individual to take risk. Financial literacy level is moderate to high in majority of cases thus it can be said they have enough capacity to analyse pros and cons of any options given to them.

REFRENCES

[1] https://www.census2011.co.in/census/city/316-gandhinagar.html
[2] https://www.census2011.co.in/census/state/gujarat.html
[3] http://www.oecd.org/finance/financial-education/37087833.pdf
[4] http://hdl.handle.net/10603/307609
[5] http://hdl.handle.net/10603/39626
[6] http://www.researchdirections.org/management/articleupload/article516.pdf
[7] http://www.researchdirections.org/Management/articleupload/article537.pdf
[8] Ahmed, Z., Noreen, U., Ramakrishnan, S. A., & Abdullah, D. F. B. (2021). What explains the investment decision-making behaviour? The role of financial literacy and financial risk tolerance. *Afro-Asian Journal of Finance and Accounting*, *11*(1), 1-19.
[9] Awais, M., Laber, M. F., Rasheed, N., & Khursheed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, *6*(1), 73-79.
[10] Bhushan, P. (2014). Insights into awareness level and Investment Behaviour of salaried individuals towards Financial Products. *International Journal of Engineering, Business and Enterprise Applications, 8(1), 53-57.*
[11] Bashir, M., & Nisar, A. (2013). Factors of short term investment decision making. *International Journal of Management & Organizational Studies*, *4*, 2305-2600.
[12] Kher, S., & Shende, P. N. (2013). A Study of Investment Pattern of Central Government Employees after the Implementation of Sixth Pay. *SUMEDHA Journal of Management, 2(1), 4.*
[13] Kumar, A. A., & Babu, M. (2018). Socio Economic Profile and Investment Risk Perception of Salaried Employees. *International Journal on Global Business Management & Research*, *7*(1), 1-8.
[14] Popat, D. A., & Pandya, H. B. (2018). Evaluating the Effect of Financial Knowledge on Investment Decisions of Investors from Gandhinagar District. *International Journal of Engineering and Management Research (IJEMR), 8(6), 226-237.*
[15] Popat, D. A., & Pandya, H. B. (2019). Identifying the Factors Affecting Investment Behaviour of Investors from Gandhinagar District. *International Journal of Science and research (IJSR), Volume 8 Issue 3, 144 – 148*
[16] Popat, D.A. (2020). A study on importance of various investment attributes during financial decisions. *International Peer Reviewed Referred Journal- Surabhi, Volume 4,Issue 42,78-86*

[17] Rehmat, I., Khan, A. A., Hussain, M., & Khurshid, S. (2023). An Examination of Behavioral Factors Affecting the Investment Decisions: The Moderating Role of Financial Literacy and Mediating Role of Risk Perception. *Journal of Innovative Research in Management Sciences*, *4*(2), 1-16.

[18] Sudha, M. K., Buvaneswari, M. R., Pothigaimalai, M. P., & Subasri, M. N. (2014). A Study on Investment Pattern Investors of Jewellery at Pattukkottai Town. *International Journal of Engineering Research, 3(11), 677-682.*