

# Empirical Study on The Relationship between Personal Financial Risk Attitude and Psychological Risk Attitude



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## Abstract

Traditional economic theories assume that individuals are endowed with certain risk preferences that are unaltered by experiences. However, recent evidence indicates that physiological, cultural, and behavioral factors play an important role in an individual's willingness to take financial risks. In the context of investment decisions, many financial companies ask customers to complete a survey before they can help the customers on financial investment or portfolios. The idea and motivation behind the study stems from one of the fundamental issues of human nature – our tolerance to risk in various facets of life. Through this study we wanted to correlate innate human nature to financial risk tolerance, especially considering when planning an individual's investment strategy.

## Methodology

- The defined goal, allowed us to design a survey which focused on lifestyle attributes of people and how it reflects on their financial risk tolerance. The survey was based on rank order scale and catered for individuals across various fields and diversities of life. Our data set covers a period of **12 weeks from May 2011 to July 2011**.
- The survey was then posted on web through **Survey sites, Emails and Facebook**. We also collected data through **Mall intercept, university survey** and through people travelling in **Amtrak**. The respondents were randomly picked from different ages, demographics, income groups, professions, etc. to give us a random sample of population proportion.
- In total **238 respondents** completed the survey, out of which after removing invalid and incomplete responses, **195** were left for analysis.
- The data collected was then sorted and prepared for analytics and finding correlation among various socio-cultural factors and financial risk tolerance. We formed clusters and carried out data segmentation to allocate common attribute to a given box.
- The prepared data was then analyzed on **SPSS 18.0** and **Microsoft Excel 2010**.

Financial relationship with	Lifestyle	Reputation	Emergency
<b>p-value</b>	0.05078*	0.697837	0.788717

*note: \* stands for a statistical significant relationship*

**Table 2: Financial Risk attitude compared with rest three (Lifestyle/Reputation/Emergency)**

Lifestyle relationship with	Reputation	Emergency
<b>p-value</b>	2.82E-09*	1.16E-07*

*note: \* stands for a statistical significant relationship*

**Table 3: Comparing Lifestyle Risk with Reputation and Emergency Risk attitude.**

## Problem Definition

### Goal 1:

Figure out the important factors which influence the financial risk tolerance or behavior of an individual.

### Goal 2:

Figure out the correlation between individual's lifestyle, Physiological, and financial risk.

### Goal 3:

How to manage an individual's financial risk?

### Goal 4:

Guide people to make informed daily decisions based upon their risk tolerance.

### Statistical Hypotheses:

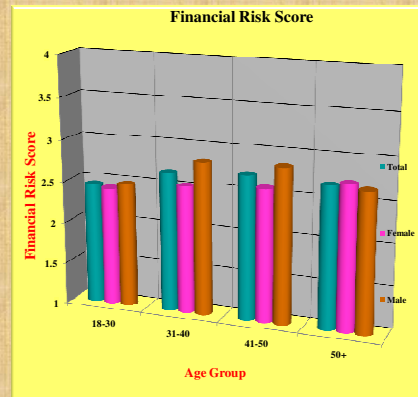
- H1: Personal Risk Attitude is related to Gender
- H2: Personal Risk Attitude is related to Age
- H3: Personal Risk Attitude is related to Income
- H4: Personal Risk Attitude is consistent with Lifestyle Behavior
- H5: Personal Risk Attitude is consistent with Reputation Behavior
- H6: Personal Risk Attitude is consistent with Emergency Behavior

## Empirical Results

Relationship with risk attitude	Gender	Age			Income
	Female vs Male	18 - 30 vs 31 - 40	31 - 40 vs 41 - 50	41 - 50 vs 51 - 60	Groups
<b>p - value</b>	0.735445	0.85165	0.04900*	0.00161*	All Higher than 0.5

*note: \* stands for a statistical significant relationship*

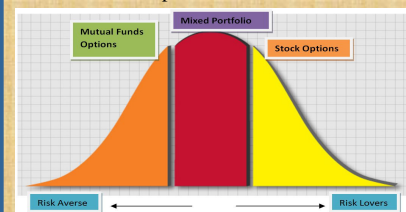
**Table 1: Risk Attitude Significance Results**



**Figure 1: Average Financial Risk Score for Females and Males of all Age Groups.**

## Managerial Suggestion

- Based on the results of this study, we promote the usage of risk tolerance templates by companies to offer individuals a portfolio based on their acceptance of risk. Thus an individual with low risk tolerance should be encouraged with investments in mutual funds, in contrast to stock option for people with high risk tolerance.
- Individuals can opt for mixed investment portfolio in accordance with their risk tolerance. We would encourage them to take our survey to know what their risk tolerance is, and henceforth can go for a desired diversified portfolio.



Distribution	1%	6%	24%	38%	24%	6%	1%
<b>Risk Score</b>	1.25	1.50	1.75	2.25	2.75	3.25	3.50
<b>Range</b>	-	-	2.25	2.75	3.25	3.50	4.00
<b>Number of Respondents</b>	2	12	45	76	46	12	2

## CONCLUSION

This research explains that there is correlation among socio-cultural factors and financial risk tolerance, which is highly positive, implying that demographics effect our perception of risk. Analyzing the responses to the survey and findings of the data collected, we conclude that, a much higher level of financial literacy will be needed by many of those who assume to have high personal risk tolerance level.