CHAPTER 2

Theoretical Background and Previous Research

2.1 Investment

Investment is an asset or item that is purchased with the hope that it will generate income or appreciate in the future (http://www.investopedia.com/terms/i/investment.asp). In an economic sense, an investment is the purchase of goods that are not consumed today but are used in the future to create wealth (http://en.wikipedia.org/wiki/Investment). In business perspective, investment decision (also known as capital budgeting) is one of the fundamental decisions of business management. Managers determine the investment value of the assets that a business enterprise has within its control or possession. These assets may be physical (such as buildings or machinery), intangible (such as patents, software, goodwill), or financial. Assets are used to produce streams of revenue that often are associated with particular costs or outflows (http://en.wikipedia.org/wiki/Investment). In finance, an investment is the commitment of funds by buying securities or other monetary or paper (financial) assets in the money markets or capital markets, or in fairly liquid real assets, such as gold, real estate, or collectibles (http://en.wikipedia.org/wiki/Investment).

There are many types of financial investments. Types of financial investments include (http://www.economywatch.com/investment/):

a. Cash investments

These include savings bank accounts, certificates of deposit (CDs) and treasury bills. These investments pay a low rate of interest and are risky options in periods of inflation.

b. Debt securities

This form of investment provides returns in the form of fixed periodic payments and possible capital appreciation at maturity. It is safer and more “risk-free” investment tool than equities. However, the returns are also generally lower than other securities.

c. Stocks

Buying stocks (also called equities) makes investors as a part-owner of the business. By investing in shares in a public company listed on a stock exchange, investors get the right to share in the future income and value of that company. The return can come in two ways. First, dividends paid out of the profits made by the company. Second, capital gains made because investors are able at some time to sell their shares for more than you paid. Stocks are more volatile and riskier than bonds.

d. Mutual funds

This is a collection of stocks and bonds and involves paying a professional manager to select specific securities for the investors. The prime advantage of this investment is that investors do not have to bother with tracking the investment.

e. Derivatives

These are financial contracts the values of which are derived from the value of the underlying assets, such as equities, commodities and bonds, on which they are based. Derivatives can be in the form of futures, options and swaps. Derivatives are used to minimize the risk of loss resulting from fluctuations in the value of the underlying assets (hedging).

f. Commodities

The items that are traded on the commodities market are agricultural and industrial commodities. These items need to be standardized and must be in a basic, raw and unprocessed state. The trading of commodities is associated with high risk and high reward. Trading in commodity futures requires specialized knowledge and in-depth analysis.

g. Real estate

This investment involves a long-term commitment of funds and gains that are generated through rental or lease income as well as capital appreciation. This includes investments into residential or commercial properties.

People can make investments in financial market in two ways, direct investment and indirect investment. Direct investment refers to spending money on an investment where the investor can see or hold a tangible good (http://wiki.answers.com/Q/Compare_and_contrast_direct_investment_with_indirect_investment). For example, people can invest directly by purchasing shares

of a company or buying an investment house; these invest are tangible and can be seen. In the other side, indirect investment is investments that are made indirectly through intermediaries, such as banks, mutual funds, pension funds, insurance companies, collective investment schemes, and investment clubs (http://wiki.answers.com/Q/Compare_and_contrast_direct_investment_with_indirect_investment). Though their legal and procedural details differ, an intermediary generally makes an investment using money from many individuals, each of whom receives a claim on the intermediary.

Investment also can be distinguished by the time the investors want to invest. There are short-term investment and long-term investment. Short-term investments are designed to be made only for a little while, and hopefully show a significant yield, whereas long-term investments are designed to last for years, showing a slow but steady increase so that there is a significant yield at the end of the term. (http://www.finalsense.com/learning/investment/comparing_short_term.htm). The main advantages to short-term investments are the potential for fast growth but short-term investments tend to be a bit riskier and show a much higher rate of fluctuation than their long-term counterparts. Compared with short term-investment, long-term investments have the ability to gain small amounts of money over a longer period of time but the investment increase in value slowly and can take years to mature.

There are many factors that affect investment decision. The proponents of behavioral finance believe that investment decision making is not a completely rational process. Individuals' investment decisions are guided by their desires, goals, prejudices and emotions. Gender, age, income, education,

wealth and marital status of individuals also influence their investment decisions (Mittal and Vyas, 2009). A study commissioned by a major brokerage firm found that gender is the third most powerful determinant in investing, after age and income are considered (Bajtelsmit and Bernasek, 1996).

A gender role is defined as a set of perceived behavioral norms associated particularly with males or females, in a given social group or systems. Gender role refers to the attitudes and behaviors that class a person's stereotypical identity, e.g. women cook and clean, men fix cars. Because every human being has stereotypical identity, they have some characteristic that differentiate one and another.

Difference characteristic among people make each people have different strategy in making investment. There are three types of investors (http://www.threetypes.com/philosophy/investor-types.shtml):

a. Risk Avoider

Risk Avoider is people who spend the majority of their life slowly growing their "nest egg" in order to ensure a comfortable retirement. Risk Avoider explicitly choose not to focus their time on investing or investment strategy; they either entrust others to dictate their investments (money managers or financial planners) or they simply diversify their investments across a number of different asset classes (they create "a diversified portfolio"). Risk avoider seeks low-risk growth of their capital, and in return, is willing to accept a relatively low rate of return.

b. Risk Taker

Unlike Risk Avoider, Risk Takers choose to take control of their investments, and not rely solely on "time" to get to the point of financial independence. Risk Takers are happy to forgo the relatively low returns of a diversified portfolio in order to try to achieve the much higher returns of targeted investments. Risk Takers recognize that they can have higher returns than Risk Avoider, and are willing to do or try anything to get those returns. Risk Takers are always looking for the next great investment; for them, it is all about being in the right place at the right time, and taking a chance on getting rich. If today's investment does not work out, there will always be another one tomorrow.

c. Specialist

The third type of investor is the Specialist. Like the Risk Taker, the Specialist realizes that there is a more powerful investing strategy than just diversifying across a range of asset classes. But, unlike the Risk Taker, the Specialist understands that the key to successful investing isn't luck, "hot tips", or "being in the right place at the right time"; it is education and experience. The Specialist recognizes that investing is no different than any other competitive endeavor — there will be winners and there will be losers, and the winners will generally be those who are most prepared. The Specialist generally picks a single investing area, and becomes an expert in that area

2.1.1 Gender and Risk Averse

Risk aversion is a concept in economics, finance, and psychology related to the behavior of consumers and investors under uncertainty (http://en.wikipedia.org/wiki/Risk_aversion). Barber and Odean (1995) surveyed the literature, which indicates that women have different attitudes toward money and investing from men. Sexton and Bowman-Upton [1990] examine the psychological traits of growth-oriented male and female entrepreneurs and find that females score significantly less on traits related to risk-taking. In computerized laboratory experiments, Powell and Ansic [1997] observe that women are less risk seeking than men.

There are several previous studies provided overviews that women are more risk averse than me when they invest. Barskey *et al.* (1996) who state that women are more risk averse than men. Byrnes, Miller, and Schafer (1999) reviewed over 150 papers on gender differences in risk perception. A recent study by Ofek and Yermack [2000] shows that those managers who already own a large investment in the firm's stock will start selling their shares when new stock options are awarded to them. Such stock selling provides diversification benefits to the executive and is an indication that he is risk averse. They concluded that the literature clearly indicated that male participants are more likely to take risks than female participants.

Women tend to avoid investment with high risk. Women also prefer holding more stocks than men to minimize the risk. A

significantly higher percentage of women than men are unwilling to take any financial risk at all (Jianakoplos and Barnesek, 1998). In addition, Jianakoplos and Barnesek (1998) also stated that a significantly higher percentage of women than men are unwilling to take any financial risk at all. Demonstrate that women hold less risky portfolios than men, and that men tilt their portfolios toward higher betas and smaller stocks (Lewellen et al, 1977). Financial advisers, believing that women are more risk averse, may recommend conservative portfolios that have lower returns (Wang, 1994).

In making investment strategies, numerous previous studies have come to the same conclusion that women are more risk averse than men. A 1995 study by the Investment Company Institute found that a much lower percentage of women versus men (less than half) were willing to take substantial mount of risk for the prospect of a substantial return (Kover, 1999). Hinz *et al*. (1997), using data from the study of the federal government's Thrift Saving Plan in 1996, concluded that women are less likely to hold risky assets and more likely to allocate assets toward fixed income alternatives (65 per cent of women vs 52 per cent men) rather than toward equities (28 per cent women vs 45 per cent men). Another research by Sunden and Surette (1998) using data from the Survey of Consumer Finance done by the US Federal Reserve System, came to the conclusion that women tend to invest more conservatively and tend to invest their retirement accounts in a more conservative fashion than men.

2.1.2 Gender and Risk Tolerance

Risk tolerance is the degree of uncertainty that an investor can handle in regard to a negative change in the value of his or her portfolio (http://www.investopedia.com/terms/r/risktolerance.asp). Risk tolerance is important because it affect a household's portfolios decisions, which are important in achieving long term financial goals. An investor's risk tolerance varies according to age, income requirements, financial goals, etc. For example, a 70-year-old retired widow will generally have a lower risk tolerance than a single 30-year-old executive, who generally has a longer time frame to make up for any losses she may incur on her portfolio. If the risk tolerance are proportional managed, the portfolio will be appropriate, otherwise inappropriate risk tolerance will give some problems. For example households with very low risk tolerance may be loss an opportunity in investing in higher beta stocks. Households with very high risk tolerance may incur unnecessary losses in wealth.

A person's risk tolerance depends on some factors. Horvart and Zuckerman (1993) suggested that one's biological, demographic, and socioeconomic characteristics, together with his / her physiological makeup affects one's risk tolerance. Mittra (1995) discussed factors that were related to individual's risk tolerance, which included years until retirement, knowledge, sophistication, income and net worth. Malkiel (1996) also suggested that an individual's risk tolerance is related to his / her household situation, lifecycle stage, and subjective

factors. Using the 1983 Survey of Consumer Finances, Hawley and Fujii (1993) employed ordered logit models to investigate effects of net worth and individual characteristics on risk tolerance. The study included economically active respondents aged 25-62. Education, income and debt were positively related to risk tolerance. Married couples and households headed by a single male were more risk tolerant than otherwise similar households headed by a single female. Age was not statistically significant in the analysis.

According to Roszkowski, Snelbecker, and Leimberg (1993), analyzing an investor's risk tolerance has tended to be based on demographics, which have been turned into risk predicting heuristics. The following heuristics, based entirely on demographics, continue to be widely used to separate people into high, average, and no risk tolerance categories (Roszkowski et al.):

a. Females are less risk tolerant than males
b. Risk tolerance decreases with age
c. Unmarried individuals are more risk tolerant than are married individuals
d. Individuals employed in professional occupations tend to be more risk tolerance than those in nonprofessional occupations;
e. Self-employed individuals are more risk tolerant than those employed by others;
f. Risk tolerance increases with income;
g. Whites are more risk tolerant than non-Whites; and

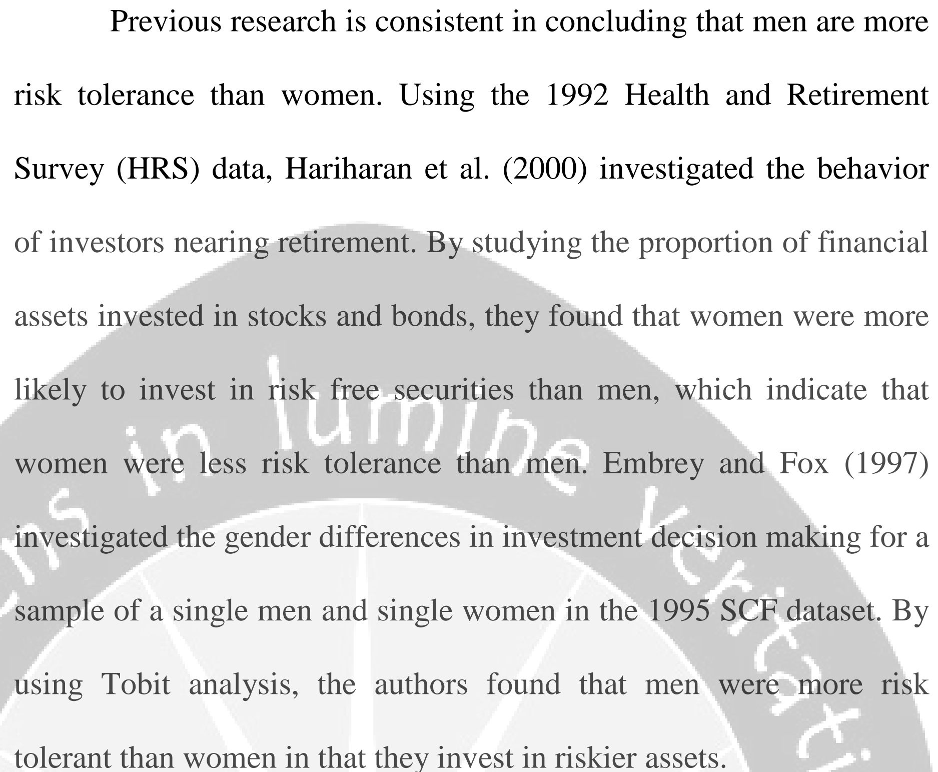
h. Risk tolerance increases with education.

Gender (i.e., male or female) was considered an important investor risk-tolerance classification factor. There also is a "prevalent belief in our culture that men should, and do, take greater risks than women" (Slovic, 1966, p. 169), which has generated a strongly held view supported by research that gender is an effective differentiating and classifying factor.

In economic situation, an investor's ability to handle risks may be related to individual characteristics such as age, time horizon, gender, liquidity needs, portfolio size, income, investment knowledge, and attitude toward price fluctuations (Fredman, 1996). For example, a 70-year-old retired widow will generally have a lower risk tolerance than a single 30-year-old executive, who generally has a longer time frame to make up for any losses she may incur on her portfolio.

Numerous researchers also believed that gender influenced one's risk tolerance. Grable and Lytton (1998) and Sung and Hanna (1996) concluded that women are significantly less risk tolerant than men. Hallahan, Faff, and Mckenzie (2004), using a psychometric Risk Tolerance Score (RTS) also found that women had lower risk tolerance than men. Another study that can support the other researches by Hudgens and Fatkin (1985) using simulations of risky situations like military decision problems and gambling have shown that women are more indeed more cautions than men.

Previous research is consistent in concluding that men are more risk tolerance than women. Using the 1992 Health and Retirement Survey (HRS) data, Hariharan et al. (2000) investigated the behavior of investors nearing retirement. By studying the proportion of financial assets invested in stocks and bonds, they found that women were more likely to invest in risk free securities than men, which indicate that women were less risk tolerance than men. Embrey and Fox (1997) investigated the gender differences in investment decision making for a sample of a single men and single women in the 1995 SCF dataset. By using Tobit analysis, the authors found that men were more risk tolerant than women in that they invest in riskier assets.



In general, one can expect individuals with a low risk tolerance to act differently with regard to risk than individuals with a high risk tolerance. Someone with a high level of risk tolerance would be expected to "accept a higher exposure to risk in the sense of taking sole responsibility, acting with less information, and requiring less control than would" someone with a low level of risk tolerance (MacCrimmon & Wehrung, 1986, p. 34). Individuals with low levels of risk tolerance generally: (a) require lower chances of a loss, (b) choose not to operate in unfamiliar situations, (c) tolerate less uncertainty, and d) require more information about the performance of an investment (MacCrimmon & Wehrung). In summary, high risk tolerance individuals accept volatile events, while low risk-tolerance individuals require certainty.

2.1.3 Gender and Confidence

Confidence is generally described as a state of being certain either that a hypothesis or prediction is correct or that a chosen course of action is the best or most effective (http:// en.wikipedia.org/wiki/Confidence). Self-confidence is having confidence in oneself. The level of confidence is different between one and others. The availability of data, practice, and socialization can enhance people's confidence. When people feel certain about the situation, their confidence will be higher.

Self-confidence is extremely important in almost every aspect of our lives, yet so many people struggle to find it. Sadly, this can be a vicious circle: People who lack self-confidence can find it difficult to become successful. Look at the following comparisons of common confident behavior with low self-confidence.

Table 1
Self-Confident and Low Self-Confident

Self-Confident	**Low Self-Confidence**
Doing what you believe to be right, even if others mock or criticize you for it.	Governing your behavior based on what other people think.
Being willing to take risks and go the extra mile to achieve better things.	Staying in your comfort zone, fearing failure and so avoid taking risks.
Admitting your mistakes and vowing to learn from them.	Working hard to cover up mistakes and praying that you can fix the problem before anyone is the wiser.
Waiting for others to congratulate you on your accomplishments.	Extolling your own virtues as often as possible to as many people as possible.
Accepting compliments graciously. "Thanks, I really worked hard on that prospectus. I'm pleased you recognize my efforts."	Dismissing compliments offhandedly. "Oh that prospectus was nothing really, anyone could have done it."

Source: http://www.mindtools.com/selfconf.html

Low self-confidence can be self-destructive, and it often manifests itself as negativity. Self-confident people are generally more positive – they believe in themselves and their abilities, and they also believe in the wonders of living life to the full.

According some studies gender also gives impact to someone's confidence level. Men and women have different level of confidence when they make investment decision. A 1992 study conducted by the Investment Marketing Group of America entitled "Women Are Different" maintained that women tend to be less confident in their ability to make the right financial decisions (Schumell, 1996). Barber and Odean (1999) also concluded that in areas related to finance, men exhibit more confident than women.

In making investment decision, men tend to be more confidence than women. A Harris Interactive survey of 900 adults conducted for Charles Schwab found that twice as many as many women as compared to men (48 per cent vs 24 per cent) view investing as "scary" (Bach, 2000). Estes and Hosseini (1988) also found that female investors have significantly lower confidence in their investment decisions than male investors even when controlling for background and ability, and when the expected outcomes of the different investments were equivalent.

2.2 Hypotheses Development

Previous research came with an opinion that gender gives some impact in selecting investment. Bajtelsmit and Bernasek (1996) use data from a study commissioned by a major brokerage firm found that gender is the third most powerful determinant in investing, after age and income. There also is a "prevalent belief in our culture that men should, and do, take greater risks than women" (Slovic, 1966, p.169), which has generated a strongly held view supported by research that gender is an effective differentiating and classifying factor (Bajtelsmit & Bernasek, 1996; Bajtelsmit & VanDerhei, 1997; Blume, 1978; Coet & McDermott, 1979; Hawley & Fujii, 1993-1994; Higbee & Lafferty, 1972; Hinz, McCarthy, & Turner, 1997; Rubin & Paul, 1979; Sung & Hanna, 1996b; Xiao & Noring, 1994). The hypothesis is formulated accordingly as follows:

H1 : Gender influence investment decision

Several recent studies have shown that men and women have different characteristic in making investment decision. This different can be seen from some aspects that are risk averse, risk tolerance, and confidence level. According to numerous previous studies, women are more risk averse, having less risk tolerance, and less confident than men (Barber & Odean,1995; Powell & Ansic ,1997; Barskey *et al.*, 1996; Byrnes, Miller, & Schafer 1999; Jianakoplos & Barnesek, 1998; Wang, 1994; Sunden & Surette 1998; Grable & Lytton 1998; Sung & Hanna 1996; Hallahan, Faff, and Mckenzie 2004; Schumell, 1996; Estes & Hosseini, 1988). Another hypothesis is organized accordingly as follows:

H2 : Women choose less risky investment