CHAPTER II

THEORETICAL BACKGROUND AND PREVIOUS RESEARCH

2.1 Theoretical Background

2.1.1 Investors

Investor means an individual who does the investing activities with the expectation of financial returns (http://www.investorwords.com/2630/). Barnewall (1987) divided two types of investor, passive and active investor. Table 3 provides the characteristics of each group.

Table 3
Characteristics by Investor Type

Active Investors	**Passive Investors**
Lifestyle Characteristics	
Risk Taker	Risk Avoider
Nonconformists (low dress consciousness)	Conformists (high dress consciousness)
Credit User	Noncredit User
High Self-Confidence	Low Self-Confidence
Investment Orientation	
Want Control of Invesment	Noncontrol Oriented
70% in Higher Risks	70% in Lower Risk
30% in Lower Risks	30% in Higher Risk
Occupational Characteristics	
Small Business Owner	Corporate Executives
Doctors-Surgeons	Doctors-Nonsurgeons
Dentists-Surgeons	Dentists-Nonsurgeons
CPA-Independent	CPA-Big Firm
Lawyer-Independent	Lawyer-Large Firm
Entrepreneurs	

Source: Warren (1990)

While accoding to Pompian (2006), passive investors have lower risk tolerance than active investors and have not become wealthy by gambling their own assets.

There are three types of investors according to this site http://www.threetypes.com/philosophy/investor-types.shtml :

a. ***Savers or Risk Avoiders.*** Investors who are risk avoiders or savers are prefer to choose a comfortable retirement. They do not focus on their time on investing or investment strategy; they either to entrust money managers or financial planners to dictate their investments or they create “a diversified portfolio”. This type of investors seek low-risk growth of their capital, and they are willing to accept a relatively low rate of return. Most of them are investing for long-term financial security and retirement.

b. ***Speculators or Risk Taker.*** Unlike the previous type of investors, speculators or risk taker choose to take control of their investment, and not rely solely on “time” to get to the point of financial independence.They are happy to let the relatively low returns of a diversified portfolio go in order to try to achieve the much higher returns of targeted investments. They are not scared to throw some money in order to get higher returns; they recognize that they can have higher returns than savers or risk avoiders, and are willing to do or try anything to get those returns. They are always looking for the next great investment and more aggresive; for them, it is all about being in the right place at the right time, and taking a chance on getting rich. If the investment of today does not work out, there will always be another one tomorrow.

c. ***Specialists.*** Like the second one, specialists realize that there is a more powerful investing strategy than just diversifying across a range of asset classes. They understand that the keys to successful investing are education and experience; it is not luck, “hot tips”, or “being in the right place at the right time”. They recognize 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. They generally pick a single investing area, and becomes an expert in that area. They know their investment area inside and outside, and instead of just entering and exiting investments, they have a plan. Having a plan is the key difference between speculators or risk takers and either savers or risk avoiders. The plan is the plot for achieve investment success, and with it, they can achieve huge returns with relatively low risk.

The benefit to be savers or risk avoiders is that they are free to spend their time and energy on things other than investing, but in return they will wait a long time before they have the opportunity at financial freedom. Speculators or risk takers have the opportunity to “hit it big” if they end up at the right place at the right time, but when they do not hit it big, they often do not even see as high of returns as the savers or risk avoiders. While being specialists requires more times and efforts, the rewards are the most profound – both in terms of control over income and the opportunity for financial success.

Differences in people’s characteristics lead people has different strategy to make an investment. According to the previous study by Bailard et al. (1986) introduced five characteristics of investors, which are individualist; adventurer; guardian; celebrity; and straight arrow. Table 4 explains the differences of each characteristics.

Table 4
Five characteristics of Investors

Types of Investors' Characteristics	Characters
Individualist Investors	Avoid extreme volatility High desire High confidence Do not want to rush
Adventurer Investors	Do the work alone Do not need help from others
Guardian Investors	Very carefully in speculation Less confidence Prefer to choose a safe investment
Celebrity Investors	Like to follow fashion Do not have any idea about investment
Straight Arrow Investors	Balance between confidence and method of action

Source: Bailard et al. (1996)

2.1.2 Nature of Investment

The term investment meansevery asset that an investor owns or control, directly or indirectly, that has the characteristics of an investment, including such characteristics as the commitment of capital or other resources, the expectation of gain or profit, or the assumption of risk (www.citizenstrade.org). The other meaning of investment is that refers to the concept of deferred consumption which may invlove purchasing an asset, giving a loan or keeping funds in a bank account with the aim of generating future returns (http://www.economywatch.com/investment/). According to Jones (2010), an investment can be defined as the commitment of funds to one or more assets that will be held over some future time period.

There are various types of investments available. The various types of investment include (http://www.economywatch.com/investment/):

a. ***Cash investments.*** Cash investment include bank saving accounts, certificates of deposit (CDs) and treasury bills. These type of investments generally pay a low rate of interest and are risky options in periods of inflation.

b. ***Debt securities.*** Debt securities provide returns in the fixed periodic payments and possible capital appreciation at maturity. These investments are safer and more 'risk-free' investments tool than equities. Still, the returns generally lower than other securities.

c. ***Stocks or equities.*** By buying stocks or equities, the investors could be a part-owner of the business and entitles them to a share of the profits generated by the company. Stocks are more volatile and therefore riskier than bonds.

d. ***Mutual funds.*** It is a collection of stocks and bonds and involves paying a professional manager to select spesific securities for the investors. The main benefit of this investment is that the investors do not have to be involved in tracking in the investment.

e. ***Derivatives.*** Derivatives are financial contracts which are derived from the value of the underlying assets, such as equities, commodities and bonds, on which they are based. Derivatives are used to minimize loss resulting from fluctuations in the value of the underlying assets (hedging).

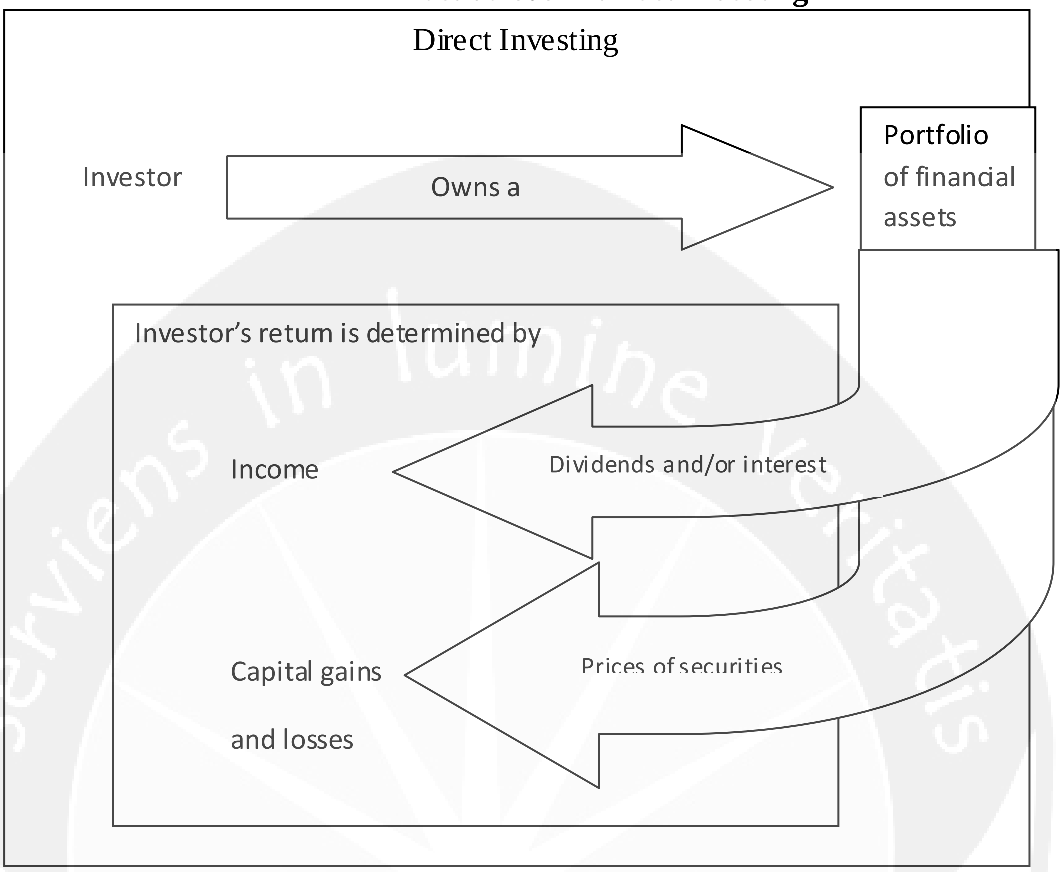
f. ***Commodities.*** The products that are traded on the commodities market are typically agricultural and industrial commodities. These products need to be standardized and must be in a basic, raw, and unprocessed state. By trading on commodities market, the investors could get high risk and high reward.

g. ***Real estate.*** Real estate is the investments which involves a long-term commitment of funds and gains that are generated through rental or lease income as well as capital appreciation. This investment includes investments into residental or commercial properties.

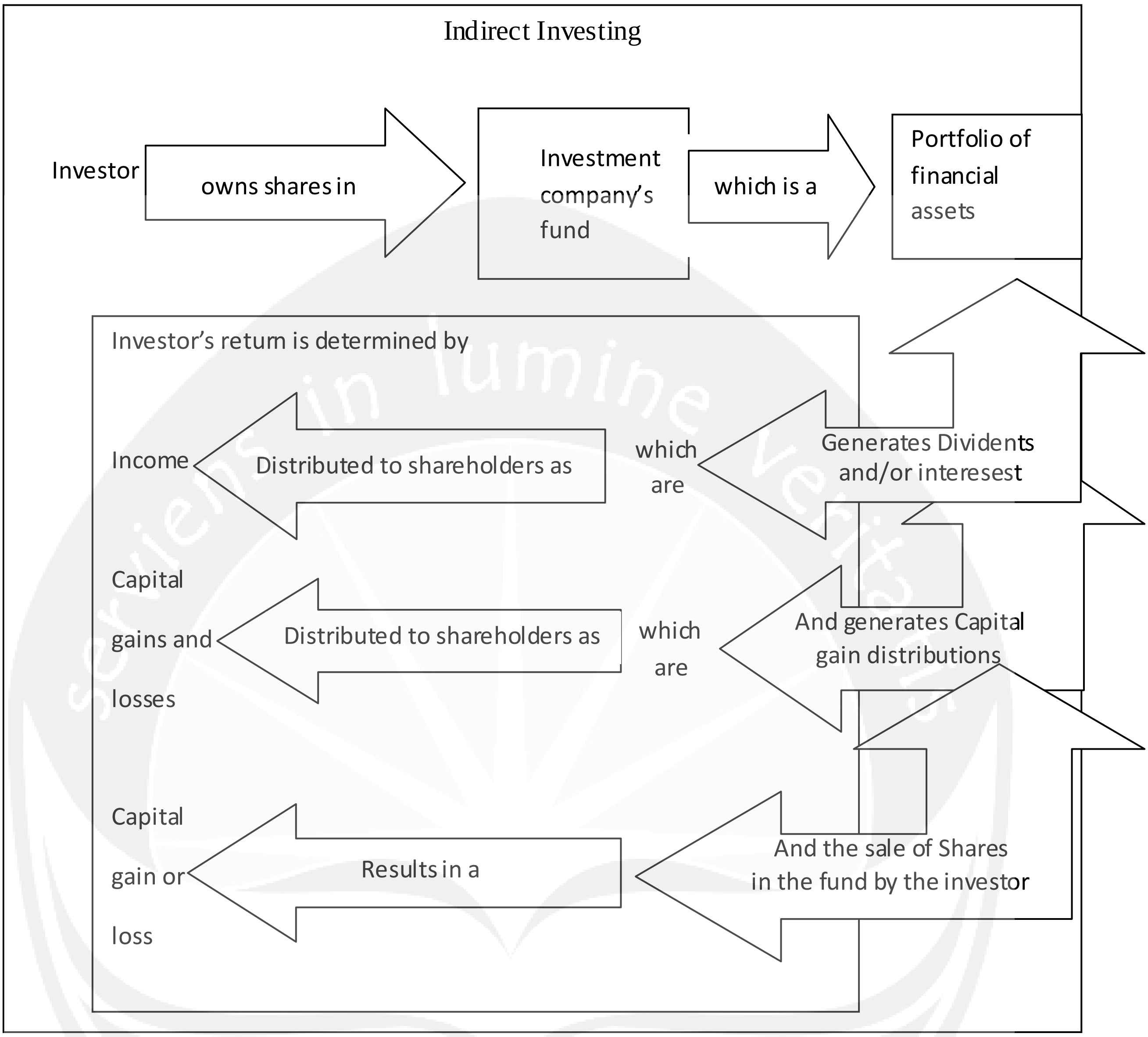
These various types of investments options provide different risk-reward. These kinds of investment options can help the investors to create a portfolio that maximizes returns while minimizing risk exposure.

The investors have a choice to invest their funds directly or indirectly in securities. Direct investing involves securities that investors not only buy and sell themselves but also have direct control over, whereas indirect investing refers to the buying and selling of the shares of investment companies which, in turn, hold portfolios of securities (Jones, 2010). The figure 1 below illustrates the differences between direct and indirest investing.

Figure 1
Direct versus Indirect Investing



Source: Jones, Charles (2010). *Investments Principles and Concepts*.Wiley.



Source: Jones, Charles (2010). *Investments Principles and Concepts*.Wiley.

The main difference is that the investment company stands between the investors and portfolio of securities.

The table 5 below explains the major types of financial assets in direct and indirect investing.

Table 5
Major Types of Financial Assets

DIRECT INVESTING	
Nonmarketable	Saving deposits
	Certificates of deposit
	Money market deposit accounts
	U.S. saving bonds
Money market	Treasury bills
	Negotiable certificates of deposit
	Commercial paper
	Eurodollars
	Repurchase aggreements
	Banker's acceptances
Captal market	Fixed income (treasures, agencies, municipals, and corporates)
	Equities (preferred stock and common stock)
Derivatives market	Options
	Future contract
INDIRECT INVESTING	
Investment companies	Unit investment trust
	Open end (money market mutual fund and stock, bond, and income funds)
	Closed end
	Exchange-traded funds

Source: Jones, Charles (2010). *Investments Principles and Concepts*.Wiley.

Investors who invest directly in financial markets, whether using a broker or others, have more varieties of assets from which to choose rather than investors who invest indirectly in financial markets.

The period of the investment also could be different. There are two types of period which are short-term investment and long-term investment. The table below explains the differences between short-term and long-term investment.

Table 6
Major Types of Financial Assets

The Period of the Investment	Explanations	Benefits	Drawbacks
Short-term investment	Designed just for a while and hopefully show a significant returns	Fast growth	Riskier than long-term investment, show much higher rate of fluctuation
Long-term investment	Designed to last years, showing a slow but steady returns, and at the end there is a significant yield	More stable, lower risk	Can take years to mature

Source:
http://www.finalsense.com/learning/investment/comparing_short_term.htm

While investing and buying stocks, the investors need to diversify their investments. The well-known term for diversifying the investment is "Do not put your eggs in one basket". It means that if people put all their eggs in the one basket, they put all their efforts or resources into one person, and if things do not work out, they lose everything (http://www.englishclub.com/ref/esl/Idioms/P/put_all_your_eggs_in_the_one_basket_340.htm).

2.1.3 Risk

Investors have to be understand that they cannot avoid risk. According to Gibson (2003), risk is the chance of making a loss. Investors are rewarded for taking risks; in general, the higher the invesment risk, the higher is the reward or return.

Investors who prefer to play safe are said to be risk-averse and who like to take the risks are said to be risk-taker. Risk could be positive and negative outcomes (http://pages.stern.nyu.edu/~adamodar/pdfiles/valrisk/ch1.pdf), and the Chinese symbol can capture that statement.

Figure 2
The Chinese Symbol for Risk

Source: http://arabiangazette.com/financial-risk-bucketful-opportunities/

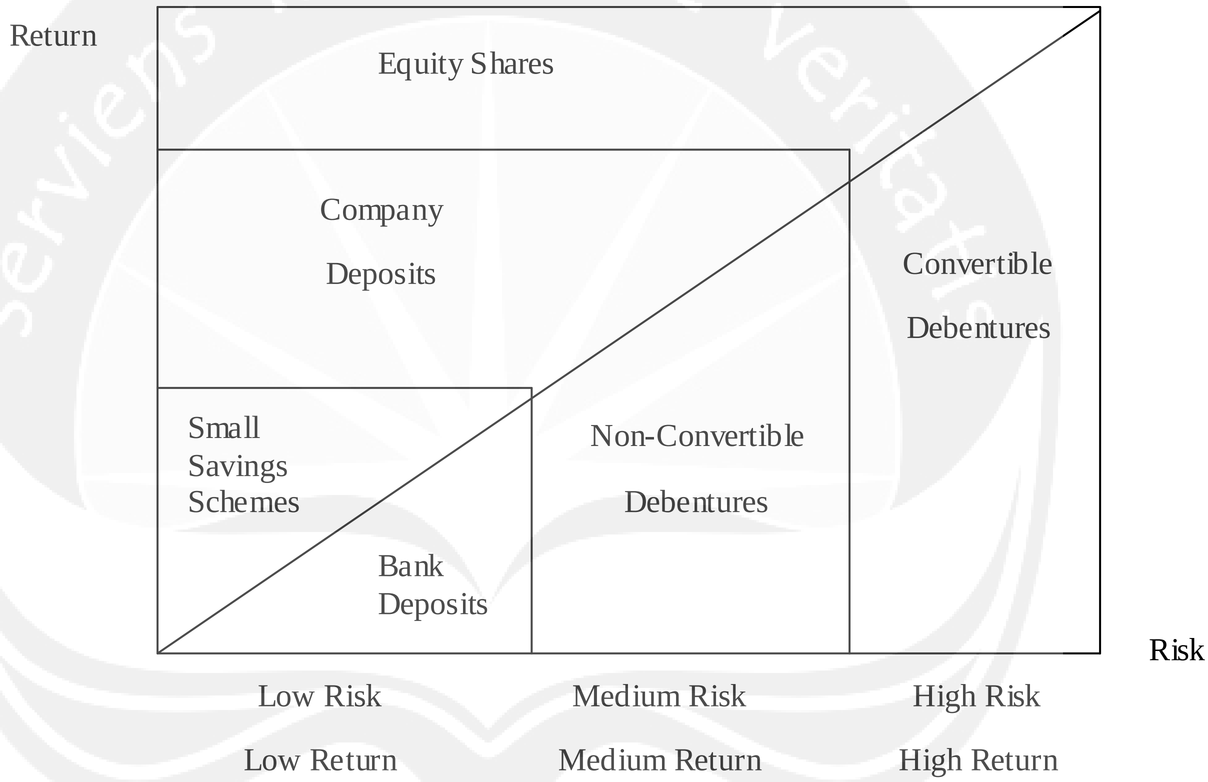
The Chinese symbol above is a combination of danger and opportunity. It means that the outcome for an investor could be loss initial investment, get money back, or make huge profit.

In the context of personal financial decision, according to Dalton and Dalton (2008, p. 898, as cited in Hanna, Waller and Finke, 2008) risk tolerance is the level of risk exposure with which an individual is comfortable; an estimate of the level of risk an investor is willing to accept in his or her investment portfolio.According to Jones (2010), risk tolerance is an investor’s willingness to accept risk when investing. Risk tolerance is the inverse of risk aversion, a higher risk aversion means lower risk tolerance.

2.1.4 Risk and Return

Return is the investors' motivation to force them in investment process. If the investors invest their funds, they are taking a risk and hoping that they could make an appreciable return. The higher the range of possible outcomes or return, the riskier the investment, as may be seen in Figure 3.

Figure 3
The Risk-Return Trade-Off



Source: Yasaswy, N.J., (2008). *Personal Investment & Tax Planning Yearbook*. Vision Books.

According to Jones (2010), there are eight sources of risk that could be affect on the return. The sources of risk are:

a. ***Interest rate risk.*** It refers to the variability in a security's return resulting from changes in the level of interest rates. It could affect bonds more directly than common stocks, but it could affect both.

b. ***Market* risk.** It refers to the variability in returns resulting from fluctuations in the overall market – that is, the aggregate stock markert.

c. ***Inflation risk.*** Inflation causes money to decrease in value at some rate, and does so whether the money is invested or not (www.investorwords.com).

d. ***Business risk.*** It is the risk of doing business in a particular industry or environment.

e. ***Financial risk.*** It is associated with the use of debt financing by companies. The higher the proportion of assets financed by debt (as opposed to equity), the higher the variability in the returns.

f. ***Liquidity risk.*** It is the risk associated with the particular secondary market in which a security trades. The more uncertainty about the time of an investment can be bought or sold and the price concession, the higher the liquidity risk.

g. ***Currency risk (Exchange rate risk).*** The investors who invest only in his or her country's stocks do not face the currency risk. The investors who invest in such financial assets as international mutual funds, global mutual funds, closed-end single-country funds, foreign stocks, and foreign bonds are affected by currency risk.

h. ***Country risk.*** It is also called as political risk. With more investors which investing internationally, both directly and indirectly, the political, and therefore economic, stability and viability of a country's economy need to be considered.

A must to take a risk is an individual decision. Indeed, the higher risk people would take, the greater the returns or rewards.

2.1.5 Behavioral Finance

According to Agha et al. (2012), behavioral finance describes the behavior of investors and management in decision making; it illustrates the outcomes of interactions between investors and managers in financial and capital markets. It is relatively new field that seeks to combine behavioral and cognitive psychological theory with conventional economics and finance to provide explanations for why people make irrational financial decisions (http://www.investopedia.com/university/behavioral_finance/).

There are some key concepts of behavioral finance (http://www.investopedia.com/university/behavioral_finance/behavioral4.asp):

a. ***Anchoring.*** It is a condition when market participant makes financial decision based on irrelevant figure or merely based on statistic, without considering other factors such as fundamental situation.

b. ***Mental accounting.*** It is a behavior considers the way people treat money, depends on how they get money, and consequently, it will affect the way they spend the money.

c. ***Confirmation and hindsight bias.*** Confirmation bias could happen because people tend to seek the informations that support their idea rather than seek out the information that contradicts. While hindsight bias could happen when people believe that some past events were predictable and obvious, in fact, the event could not reassonably predicted.

d. ***Gambler's fallacy.*** In this concept, people have tendency to believe that onset of certain random event is less likely to happen after the series of events. This way of thingking is incorrect because past events do not change the probability of some events that will occur in the future.

e. ***Herd behavior.*** It is a behavior when people will follow the act (rational or irrational) of larger group, however, individually can make different choice with larger group.

f. ***Overconfidence.*** It is the tendency of people to overestimate his or her ability in performing some tasks.

g. ***Overreaction and availability bias.*** People tend to overract against new information and create new opinion biased toward the latest news.

h. ***Prospect theory.*** This theory was represented by Kahneman and Tversky. It suggests that people value gain and loss in different way.

With this 8 key concepts of behavioral finance, people can identify some of the biases. People need to apply that knowledge to their own investment decision.

2.1.6 Risk, Race, and Religion

Different in ethinicity in line with different in culture. Thus, it will affect the people behavior such as perception about risk. Race has been shown to influence risk perceptions (Flynn et al. 1994).

Javanese people has some rules and philosophy that different from other ethnicity. There are two concepts that relate with this topic. First, *Narimo ing pandum*, it is a concept that Javanese people believes God already gives them a destiny and they could not reject it. While the second one is *Urip ora ngoyo*, it represents that Javanese people would do activities without run over his or her power. For instance, he or she only has 1 million Rupiah for one month, so he or she should arrange the money well and spend wisely in order to not exceed the limit. This two principles show that Javanese people seems to be risk averse.

Compared Javanese and Chinese people, Chinese people has one principle that called *Zhi or Chi* (www.sindoweekly-magz.com). *Zhi or Chi* means that Chinese people has to work hard to achieve their dreams. They would be likely to take a risk, because they thought that they would receive more gains after they take pains.

Then, talk about religion, by providing moral and ethical teachings for their adherents to encourage them to behave in a specific way, religions might directly influence individual economic behaviour by its impact on traits and attitudes (Barro and McCleary, 2003). The Bible and Qur'an directly promotes risk averse for individual financial decision.

Ecclesiastes 11:2 recommend the diversification of financial portfolios and risk. Investment capital should be divided into several parts and not be risked all in one place: ‘Divide your portion to seven, or even to eight, for you do not know what misfortune may occur on the earth.’ Furthermore, the Bible reminds against investing in assets which the investor does not exactly know: ‘Desire without knowledge is not good, and whoever makes haste with his feet misses his way’ (Proverbs 19:2). The Qur’an tries to limit the riskiness of financial related behaviour by avoiding gambling (*Maisir*) not only in the sense of games of chance, but also in the sense of investment in risky assets (*Gharar*) because it considers as *haraam*. Muslims are also prohibited from engaging in *Riba* (addition or increase or growth), interest as practiced by a majority of Islamic scholars to be equivalent to *riba* (http://www.kantakji.com/fiqh/Files/Economics/c129.pdf). ‘O you who believe, intoxicants, and gambling, and the altars of idols, and the games of chance are abominations of the devil; you shall avoid them, that you may succeed’ (Qur’an 5:90). In short, both the Bible and the Qur’an, how much financial risk taking is allowed and in which assets adherents are permitted to invest.

For Balinese people, there is term in Bali Language *Bani Meli Bani Ngadep*, means that there is no ambition to get much money while doing an investment and/or a business activity (http://sanggrahanusantara.blogspot.com/2009/03/). They believe that they could be succeed to get high profits by making an investment and/or business plan. For Hindu itself, there is *Sad Ripu* which comes from *sad* that means six and *ripu* that means enemy (http://katahindu.wordpress.com/2012/06/18/sad-ripu-enam-musuh-dalam-diri-manusia/). Thus, *Sad Ripu* means six enemies which are human being in self. The componentes of *Sad Ripu* are (http://katahindu.wordpress.com/2012/06/18/sad-ripu-enam-musuh-dalam-diri-manusia/):

a. ***Kama.*** Kama means negative desire.
b. ***Lobha.*** Lobha means greedy. People who are greedy is never satisfied.
c. ***Krodha.*** Krodha means angry. People who cannot control his or her temper would harm themselves and others.
d. ***Moha.*** Moha means confusion that can lead people's mind into the dark, so people cannot think clearly. This will cause the person does not able to distinguish which one is good and bad.
e. ***Mada.*** Mada means drunk. Drnk people's mind does not function properly. Consequently, he or she will be arrogant and say something that hurt other people.
f. ***Matsarya.*** Matsarya means jealous. Matsarya people feel that he or she is poor and has bad luck.

There are two components that indicates Hindus are more risk averse, Kama and Lobha. If people could not control his or her desire and people who is greedy, he or she would invest more to meet his or her desire. This action would lead people to take high-risk investment. In short, the Bible, Qur'an and Weda propose how much financial risk taking is allowed and in which assets adgerents are permitted to invest.

In Buddha, there is *Saddhā Bala* means belief power (http://larosberbagibersama.blogspot.com/2012/02/penerapan-pancabala-sebagai-landasan.html?m=1). This belief is the basic guidence to do the daily activities. It has important role to do something. People who are Buddha believe that *Saddhā*

Bala will make them more confidence to do their activities, even the investment activities. They also believe that *Saddhā Bala* can increase their potential to do their activities. They stated if they want to be succeed, they have to develop *Saddhā Bala* to increase their confidence level and their potential. If they could not manage their confidence, they will be more and more confidence and then become overconfidence. The overconfidence itself represents the characteristic of risk taking behavior. If they cannot control their confidence, they can be a risk taker in their daily activities, even in investment activities.

2.1.7 Gender and Investment Perspective

There are different perspective between men and women investors to respond risk and make investment decision. This stereotype may also have a biological basis. Gender refelcts psychological and social consideration as well as biological factors. Barber and Odean (2001), in a large sample study of over 35,000 households, found that men trade 45% more than women and trading reduces men's net returns by 2.65 percentage points a year as compared to 1.72 percentage points for women.

Women investors tend to be more conservative than men when they perceive a certain situation as ambigious (Zinkan and Karande, 1991). They would be more likely to invest in money market mutual funds than male. While male would be more likely to invest in higher-risk investments, such as high-growth stocks and global stocks, compared to women.

A dominant finding is that women are more risk sensitive in the context of losses than gains (He et al., 2007). It happened because women estimate the probability of gains and losses differently compared to men. While Schubert et al. (2000) found in the context of insurance against loss, research suggests that men and women's decision making is similar.

Weber et al. (2002) had a survey to quantify five distinct risk domains: financial risk, health and safety risk, recreational, ethical and social risks. The results explained that women were more risk averse in all domains except social risk.

Graham et al. (2002) suggested that gender differences in investment strategies may be related to the differing styles of information processing. Men often did not process all the information since they are highly selective. In contrast, women are hypotherized and process information comprehensively than men.

2.1.8 Overconfidence

According to Cheng (2007) in Irwan Trinugroho's article about "Overconfidence and Excessive Trading Behavior: An Experimental Study", overconfidence behavior is the most common characteristics found in humans that reflect one's tendency to overestimate the ability, the chances for success and the probability that someone will gain positive outcomes and the accuracy of the knowledge possessed.

There are four aspects of overconfidence in finance (Glaser and Weber, 2004), they are:

a. ***Miscalibration.*** It is the tendency to think that the subjective probability is higher than the actual probability.

b. ***Better than average effect.*** It is the tendency to think that people has an above average ability of skill.

c. ***Illusion of control.*** This is people's believe that he or she has more ability to predict or more satisfactory results when they have high involvement in it.

d. ***Unrealistic optimism.*** It is a form of defensive attribution wherein people think that good things are more likely to happen to them than to others and that bad things are less likely to happen to them than to others (http://www.psychology-lexicon.com/cms/glossary/glossary-u/681-unrealistic-optimism.html).

These four aspects of overconfidence lead the invetors who are overconfidence trade more than the investors who do not overconfidence. According to Tversky (1998), if each person has a limited amount of information and is confident that his or her predictions are right, the result is higher trading, much more than would be expected under a rational model. If the investors are overconfidence and they trade more in the markets, it seems that they will take more risk than the investors who do not overconfidence.

2.2 Previous Research

According to Barber and Odean (2001), women tend to trade less than men and as a result they earn higher returns. However, men are more likely to invest in riskier securities. The study found that men earn 1.4 percentage points less annually than women do on a risk-adjusted basis.

Jianakoplos and Bernasek (1998) found the eviddence that women are more risk averse than men when their entire portfolio of assets is considered. In their reserach, they also found that women expected to accumulate less wealth on average, since lower risk is associated with lower returns on investment. This result in line with the study of "Does the Degree of Relative Risk Aversion Vary with Household Characteristics?" by Palson (1996). He found that women tend to be more risk averse than men. He also found that age is the only significant positive factor to increase risk aversion.

Manish and Vyas (2011) researched for gender differences in preferences for risk and investment decision making. Psychologists suggest that women are less confidence and are more methodical in their processing and accumulation style. The study founds that men engage in more risk taking and more overconfident than women. Women tend to put their funds in low risk – low return investment.

According to Amos Tversky (1998), concluded three aspects that affect investment decision making are risk attitudes, mental accounting, and overconfidence. These three aspects provide directions to many market anomalies and investor phenomena. By understanding these biases may suggest ways to improve investment strategies and performance in the market.

Hassan and Hussein (2006) identified factors influencing the UAE investor behavior. They found six factors are the most influencing factors on the UAE investor behavior: expected corporate earnings, get rich quick, stock marketability, past performance of the firm's stock, government holdings and the creation of the organized financial markets. Other aspects are the least influencing factors, such as expected losses in other local investments, minimizing risk, expected losses in international financial markets,family member opinions, gut feeling on the economy. The unexpectedly least influence on the behavior of the UAE investor behavior that they found was religious reasons. In 2009, they examined also the relationship between financial literacy and the influence of the factors that affect the investment decision of the UAE individual investors who invest in the local financial markets. The study found the most influencing factor that affects the invesment decision is religious reason and the least affecting factor is rumors.

Renneboog and Spaenjers (2012) researched the effect of religious affiliation on individual economic attitudes, such as thrift and risk, and investment behaviour in the Netherlands. The result was a positive relationship between individual religious affiliation and both risk aversion and individual propensity to save.

The previous research by Barsky et al. (1997), they examined how risk tolerance varies by individual demographic characteristics. They found risk tolerance differs significantly by religion. They stated that Chatholics are less risk averse than Protestants, whereas Jews are the most risk tolerant.

Riley and Chow (1992) examined asset allocation decision. They found risk aversion to be decrease with wealth, education, and age, until age 65, at which time risk aversion increase. They also found risk aversion to be increase among females and non-Whites compared to males and Whites.

Pan and Statman (2008) researched about “Questionnaires of Risk Tolerance, Regret, Overconfidence, and Other Investor Propensities”. They found that men are more overconfidence than women and people with highly overconfident have high risk tolerance than those who are less overconfident.

Albaity and Rahman (2012) conducted a research about "Gender, Ethnicity, and Religion and Investment Decisions: Malaysian Evidence. They found that every gender, ethnicity, and religion have different investment behavior. In their research, they found that Malaysian Chinese men have the highest risk tolerance compared to Malaysian Malay men and Malaysian Indian men. They also found that Malaysian Christian men have the highest risk tolerance than others religion. They also research about the different types of overconfidence. They found that Malaysian Indian men have the highest overconfidence among others.

The table below shows the summaries of the previous research about this topic.

Table 7
Summaries of the Previous Research

Author(s)	Variable(s)	Result(s)
Odean and Barber (2001) Boys will be boys: Gender, Overconfidence, and Common Stock Investment Quarterly Journal of Economics	Gender Confidence level	Women tend to trade less and get higher return than men Men are more confidence than women
Jianakoplos and Bernasek (1998) Are women more risk averse? Economic Inquiry Vol. 36 No. 4 pp. 620-630	Risk taking level	Women are more risk averse than men
Palsson (1996) Does the degree of relative risk aversion vary with householdcharacteristics? Journal of Economic Psychology Vol. 17 No. 6 pp. 771-787	Risk taking level Age	Women are more risk averse than men Age could increase the risk aversion level

Author(s)	Variable(s)	Result(s)
Manish and Vyas (2011) A Study of Psychological Reasons for Gender Differences in Preferences for Risk and Investment Decision Making IUP Journal of Behavioral Finance Vol. 8 No. 3 pp. 45-60	Confidence level Risk taking level	Women are less confidence Women tend to put their funds in low risk – low return investment
Amos Tversky (1998) The Psychology of Decision Making	Factors affecting investment decision	Risk attitudes, mental accounting, and overconfidence
Hassan and Hussein (2006) Factors Influencing Individual Investor Behavior: An Empirical study of the UAE Financial Markets The Business Review, Cambridge Vol 5 No. 2 pp. 225-232	Factors affecting investment decision	Expected corporate earnings, get rich quick, stock marketability, past performance of the firm's stock, government holdings and the creation of the organized financial markets
Hassan and Hussein (2009) Financial literacy and investment decisions of UAE investors The Journal of Risk Finance Vol. 10 No. 2 pp. 500-516	Factors affecting investment decision	Religious reason
Renneboog and Spaenjers (2012) Religion, Economic Attitudes, and Household Finance SSRN Working Paper Series	Religion	There is a positive relationship between individual religious affiliation and both risk aversion and individual propensity to save
Barsky et al. (1997) Preference Parameters and Behavioral Heterogenity: An Experimental Approach in The Health and Retirement Study The Quarterly Journal of Economics Vol. 112 No. 2 pp. 537-579	Religion	Chatholics are less risk averse than Protestants, whereas Jews are the most risk tolerant
Riley and Chow (1992) Asset allocation and individual risk aversion Financial Analysts Journal Vol. 48 No. 6 pp. 32	Wealth, education, age	Risk aversion is decreasing with wealth, education, and age, until age 65, at which time risk aversion increasing

	Race, gender	Risk aversion is increasing among females and non-Whites compared to males and Whites
Pan and Statman (2008) Questionnaires of Risk Tolerance, Regret, Overconfidence, and Other Investor Propensities	Overconfidence level	Men have higher overconfidence than women
Albaity and Rahman (2012) Gender, Ethnicity, and Religion and Investment Decision: Malaysian Evidence Journal of Sociological Research Vol. 3 No. 2	Gender, race, religion	Malaysian Chinese men have the highest risk tolerance Malaysian Christian men have the highest risk tolerance
	Overconfidence level	Malaysian Indian men have the highest overconfidence Malaysian Buddha men have the highest overconfiedence

Source: the author's summaries

2.3 Operational Definition of This Research

The operational definition of this reserach is summarized in the table below:

Table 8
The Operational Definition of This Research

Variable	Operational Definition	Category	Scale
Gender	The socially constructed roles, behaviours, activities, and attributes that a given society considered suitable for men and women (http://www.who.int/gender/whatisgender/en/)	1. Men 2. Women	Nominal

Variable	Operational Definition	Category	Scale
Ethnicity	People's background that has value and/or culture differences among every ethnicity	1. Javanese 2. Chinese 3. Others	Nominal
Religion	People's believe	1. Islam 2. Chatolic 3. Protestant 4. Hindu 5. Buddha	Nominal
Risk Taking Level	The wiilingness to take a risk	1. Conservative (14-23.99 points) 2. Moderate (24-33.99 points) 3. Aggresive (34-42 points)	Interval
Confidence Level	People overestimate their ability while performing their task	1. Less Confidence (15-26.99 points) 2. Confidence (27-38.99 points) 3. Moderate person (39-50.99 points) 4. Very Confidence (51-6299 points) 5. Overconfidence (63-75 points)	Interval

In this research, the author categorizes some categories such as gender, ethnicity, religion, risk taking level, and confidence level. In the Bible, it is already stated about gender. There is a verse in Genesis 1:26-27 stated 'Then God said, "Let us make man in our image, after our likeness. And let them have dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth." ' So God created man in his own image, in the image of God he created him; male and female he created them' (http://www.biblegateway.com/passage/). From these passage, it is real that God is created male and female, so, the author uses men and women to describe about gender.

For the ethnicity, the author uses Chinese, Javanese, and others. Others mean the other ethicities in Yogyakarta (table 1) are included in this research.

About Chinese itself, the author uses it because the Chinese economic center is getting bigger (http://sejarah.kompasiana.com/2012/03/14/harmoni-kehidupan-cina-di-kota-gudeg-446942.html#). Now, the economic center is not only in Ketandan (Malioboro), but also around Poncowinatan and Gondokusuman. This figure below is the site map of pecinan (China Town) in Yogyakarta.

Figure 4
The Site Map of Pecinan (China Town) in Yogyakarta

Source: http://pecinanjogja.blogspot.com/p/home.html

Because of the developing of the Chinese economic center, so the author uses Chinese also for describing about the ethnicity.

Based on table 2 about the distribution of the religion in Yogyakarta, the majority of the population are Muslim. The Muslim people in 2010 is about 90.48%. Followed by Chatolic, they are about 5.71% and Protestant 3.38%. Even the population who are Hindu and Buddha lower than the three others, the authors considers all of the religions.

For risk taking level, there are three categories, which are conservative, moderate, and aggresive. While confidence level has five categories, which are less confidence, confidence, moderate, very confidence, and overconfidence. These categories both risk taking level and confidence level would be explained in chapter 3.

2.4 Hypotheses

Previous researches shown that both demographic and psychographic factors could affect the investment decision making whike taking a risk; which demographic factors are age, earnings, education, gender, ethnicity, religion and employment (Zinkan and Karande, 1991; Graham et al., 2002; Schubert et al., 2000; He et al., 2007; Odean and Barber, 2001; Riley and Chow, 1992; Flynn et al., 1994; Albaity and Rahman, 2012; Hassan and Hussein, 2009; Renneboog and Spaenjers, 2012, Barsky et al., 1997; Albaity and Rahman, 2012).

The hypothesis is formulated accordingly as follows:

H.1 Gender, ethnicity, and religion influence investors' risk taking level.

According to the previous researches, overconfidence affect the invesment decision making, and the males Malaysian Buddha have highest overconfidence than others (Tversky, 1998; Pan and Statman, 2008; Albaity and Rahman, 2012). It represents that diversity among gender, ethnicity, and religion affect the different type of overconfidence. The hypothesis is formulated accordingly as follows:

H.2. Gender, ethnicity, and religion influence the individual investment behavior, which is different type of confidence.

Some previous researches have shown that women and men have different investment perspective. This differences can be seen from three aspects that are risk averse, risk tolerance, and confidence level. According to previous researches, men are risk taking, having high risk tolerance, and having high confidence level than women (Terrance Odean and Brad M. Barber, 2011; Hinz et al., 1997, Byrnes et al., 1999, and Bernasek and Shwiff, 2011; Jianakoplos and Bernasek, 1998 and Palsson, 1996; Rita, 2008; Manish and Vyas, 2011; Barber and Odean, 2001; Zinkan and Karande, 1991). The hypothesis is formulated accordingly as follows:

H.3. Men are more risk taking than women.

Based on previous researches, it shown that there is different confidence level between men and women. The result stated that men are having high confidence level than women (Odean and Barber, 2001; Manish and Vyas, 2011; Tversky, 1998; Pan and Statman, 2008; Albaity and Rahman, 2008). The hypothesis is formulated accordingly as follows:

H.4. Men are more confidence than women.