CHAPTER II

THEORETICAL BACKGROUND AND PREVIOUS RESEARCH

2.1 Theoretical Background

2.1.1 Investor

According to Liaw (2004) investors clients can be distinguish between investment management for individual investors and institutional investors. According to Investopedia, definition of Individual investor is investors who buy and sell securities for their personal account, and not for another company or organization (http://www.investopedia.com). Investopedia define institutional investor as a non-bank person or organization that trades securities in large enough share quantities that they qualify for preferential treatment and lower commissions. (http://www.investopedia.com). McMillan *et al.* (2011) explain that Individual investors' short term goals planning are such as providing children's education, saving for major purchase or starting business and also to get income in the retirement period.

2.1.2 Nature of Investment

Jones, Charles P. (2009) define that an investment is the commitment of funds to one or more assets that will be hold over some future period. It is concerned with the management of investor's wealth. Rose, Peter S. and Marquis, Milton H. (2008) explains that investment generally refers to the acquisition of capital goods such as buildings and equipment, and the purchase

of inventories of raw materials and goods to sell. The form of investment for business firm, government, and house hold is different. In business firm, expenditures on capital goods and inventories are including as investment expenditures. For government, the spending to build and maintain public facilities is the form of investment. And in the household the form of investment is such as purchase a house. Investments often require huge of funds, especially business firm as the leading investment sector in the economy, but it can increase the productivity of labor and leads to higher standard of living. The huge funds can be raised quickly by selling financial claims in the financial markets. Financial claims promise investors to get a future flow of income the form of dividends, interest, and other return. Investor will expect not only recover the original fund but also additional income as reward for waiting assuming risk, even there is no guarantee that the expected income will ever materialize.

According to Damodaran, Aswath (2012) there are three steps that investors consider in investment choices, such as:

a) Asset allocation, in these step investors will determine which asset classes to invest their funds in. this is the first and the most important step and will depend on investor preferences.
b) Asset selection: in asset classes that choose in the first step investors have to choose the specific asset to hold.

c) Performance Evaluation: The judgment that investors made to choose investment will depend on how the investor measure risk and trade off to get higher return.

According to Jones, Charles P (2009) the foundation for making investment decision are the tradeoff between expected return and risk, the investment decision process that practiced nowadays is the great unknown; all the investors have to deal with uncertainty that the realized return on any risky assets may be different from what was expected. Third is the global investment arena, where investors have to think investment in a global context and the last is importance of internet, where investors can access a wealth of information about investing, trade cheaply and quickly for their investment. According to Obamuyi, Tomola Marshal (2013) there are five principal factors that influencing investment decision, which are performance of the company's stock, expected stock split/capital increases/bonus, dividend policy, expected corporate earnings and get-rich-quick. That research also found that the socio-economic characteristics of investors (age, gender, marital status and educational qualifications) influence in the investor investment decision. According to Barber and Odean (2001) selecting common stocks that will outperform the market is a difficult task.

According to Chandra, Abhijeet (2009) Individual investors take trading decisions based on their self-perceived competence that is influenced by several factors, such as:

1. Income

Chandra, Abhijeet (2009) explain that Individual with higher income found to be more confidence than individual with lower income. It is prove that investor with higher income is more confidence to make a judgment in investment. This research found that significant income level leads investors to be more confident and they are more willing to act on their own judgments in term of investment in stock market.

2. Gender

As stated on Barber and Odean (2001) that Psychological research has established that men are more overconfidence than women, especially male-dominated in finance sector. The result of the research are supported the financial model that men are more confidence than women. Men trade worse than women and they reduce their return more so than women do.

3. Age

Chandra, Abhijeet (2009) explain that investor trade less frequently as they grow older, they tend to play safe with their funds. The research also found that investors in the age group 25-35 years and 35-45 years are more competence and having more passion in high return.

4. Knowledge

    a. Education Background

        Chandra, Abhijeet (2009) explain that perception and knowledge of investors could make them become overconfidence. Higher level of education makes an investor feel competence and

lead them to make frequent trading decision in financial market. Education status determines their understanding of financial product, offers, and opportunity that makes them to be more confidence in makes a financial decision.

b. Information

According to Merton, Robert C. (1987) based on asset pricing models, investors act on every type of publicly available information instantaneously as soon as it received. There are two information costs: (1) the cost of gathering and processing data and (2) the cost of transmitting information from one party to another source of information such as firm itself, stock market advisory services, brokerage houses, and professional portfolio managers. According to Lee *et al.* (2008) nowadays Individual investors become more dependent on multimedia information and increase their understanding by information that posted on the web. Investors will collect all the relevant company stock information before they decide to investing their funds.

This research is using control variable to clearly explain the influence of main variable or the independent variable which is investor attention of company stock information (using Google search volume) to the dependent variables. It support by dictionary.com that control variable is a factor held constant to test the relative impact of an independent variable (http://dictionary.reference.com). Control variable that used in this research are:

a) Size

According to Cornett *et al.* (2009) company size can be measure by market capitalization or market value. According to InvestingAnswer market value of equity is the total market value of all of a company's outstanding shares (http://www.investinganswers.com).

b) Market to book ratio

Market to book ratio is risk factors that must be consider by the investor. If the price is high it indicating that the firm is undervalued. A value that less than 1 is means that the firm is undervalued. The higher the market to book ratio is better the firm.

c) Age

The company age, start from the company IPO until the years 2013.

d) P/E ratio

Price earnings ratio (P/E ratio) is to understand the effect of market towards stock performance that can be seen from the EPS. It compares the stock price with earning per share. According to Cornett *et al.* (2009) price earnng ratio is measure the willingnes of investors to pay for each dollar the company earn per share of its stocks. The higher the price earning ratio is the better the compamy performance.

2.1.3 Capital Market

According to Rose, Peter S. and Marquis, Milton H. (2008) capital market is designed for long term loans (credit) investment by business, government, and household. The original maturity of this financial instrument is more than one year and the range loan in size from small to multimillion credits. Obamuyi, Tomola Marshal (2013) define that efficient funds transfer between lender and borrower is the basic function of capital market. There are three basic objectives which makes investors invest in capital market:

1. Wealth maximization
2. Liquidity maintenance
3. Risk minimization

According to Fabozi, Frank J. and Drake, Pamela Peterson (2009) there are two types of capital market securities which are equity and debt. Equity is issued by corporations and represents shares of ownership interest. It includes common stock and preferred stocks. Common stock is a perpetual security that has no maturity and it is represent the ownership of the corporation. Preferred stock is representing ownership interest in a corporation that has redemption date. And the other capital market securities is debt obligation that issued by corporation and local government. It is a financial instrument whereby the borrower promises to repay the maturity value one year after insurance.

There are some indicators that can be used to measure the performance of capital market. These indicators such as:

a) The number of listed company, according to businessdictionary.com this is the sum of company that listed on each of stock market. Company listed is firm whose share is listed (quoted) on an exchange market for public trading. A company can be listed on more than one exchange market that called dual listing (http://www.businessdictionary.com). The more the number listed company it means that the more liquid that market.

b) Total Trading Volume, it is measure how many trades take place for a security or on an exchange on a given trading day. A high trading volume is an indicator of a high level of interest in a security at its current price. It is an important tool in technical analysis, trading volume is used to determine the strength of a market indicator (http://financial-dictionary.thefreedictionary.com).

c) Market Volatility, according to investorwords it is the unpredictable and vigorous changes in the price within the stock market. It is necessary for some movement within the market in order to sell commodities, however a volatile market represents the most risk to investors (http://www.investorwords.com).

   Investopedia defined that market volatility is a statistical measure of the dispersion of returns for a given security or market index. Higher the volatility are the riskier the security (http://www.investorwords.com). Market volatility will measure from these two components which are Risk

of Market and Return of Market. Risk of Market shows the Risk of each market that will take by the investor. Risk of market can either be measured by using the standard deviation or variance between returns from that same security or market index (http://www.investopedia.com).

d) Market Capitalization, According to investorwords, it is represents the aggregate value of a company or stock. It is obtained by multiplying the number of shares outstanding by their current price per share. Market capitalization is use to see the size of the market. The higher the amount of capitalization market it is means the higher the size of the market (http://www.investorwords.com)

2.1.4 Random walk Theory and Efficient Market Hypothesis

According to Bodie *et al.* (2008) random walk theory is the notion that stock price changes are random and unpredictable. If stock price movement were predictable, that would be damning evidence of stock market inefficiency.

According to Rose, Peter S. and Marquis, Milton H. (2008) the efficient markets hypothesis suggest all information that has bearing on the market value the prices of that assets. Bodie *et al.* (2008) define that efficient market hypothesis is the hypothesis that prices of securities fully reflect available information about securities. It's clearly define by McMillan *et al.* (2011) that efficient market is a market in which asset prices fully reflect all past and present information; market in which asset prices reflect the new information quickly and rationally. The important point of efficient market is price should be expected react only to the

elements information release such as unexpected or surprise information and investors process the unexpected information and revise expectation.

Rose, Peter S. and Marquis, Milton H. (2008) explains that if efficient market hypothesis is correct, investors will react to temporary underpricing or temporary overpricing of assets and make changes in their portfolios because any temporary deviation of actual returns from expected returns should be eliminated.

McMillan *et al.* (2011) also stated that there are some factors that contributing to market efficiency such as market participants where the number of investors (individual and institutional) related to the market efficiency. Other factor is information availability such as trading activity and traded companies and financial disclosure. There are two costs that incurred by traders in identifying and exploiting possible market inefficiencies affect the interpretation of market efficiency. First is transaction cost, according to Investopedia (http://www.investopedia.com) it is an expenses that incurred when buying or selling securities. Transaction costs include brokers' commissions and spreads (the difference between the price the dealer paid for a security and the price the buyer pays). Second is information acquisition cost, the cost of a business to acquire a new customer. The company recognizes costs, including marketing and incentives, to introduce new customers to the company's products and services. The customer acquisition cost is calculated by dividing total acquisition costs by total new customers over a set period of time.

According to Bodie *et al.* (2008) in market equilibrium, efficient informational gathering should be beneficial, because when information cost

investors' money to uncover and analyze, investors will expect the investment analysis result can increased the expected return and investor will have an incentive to spend time and resources to analyze and uncover new information only if that activity can generate higher investment return.

According to Fama (1970) in McMillan *et al.* (2011) there are three forms of efficiency that shows in Table below:

Table 1
Three Forms of Market Efficiency

Market Prices Reflect :			
Forms of Market Efficiency	Past Market Data	Public Information	Private Information
Weak form of market efficiency	√		
Semi strong form of market efficiency	√	√	
Strong form of market efficiency	√	√	√

Source: McMillan *et al.* (2011)

According to Fama (1970) in McMillan *et al.* (2011) the securities prices in the weak form fully reflect the past market data, which refers to historical prices and trading volume information. The investors cannot predict the future prices changes by extrapolating prices or pattern of prices from the past because it's already reflected in current prices.

Prices in Semistrong form efficient market reflect all the past and publicly available information. In Rose, Peter S. and Marquis, Milton H. (2008) all buyers and sellers are rational and use the all publicly available information to help them value financial assets.

Strong form shows that securities prices is fully reflect all the public and private information such as information that possessed by insiders who work with

the company and have access to its privileged information as stated in Rose, Peter S. and Marquis, Milton H. (2008).

2.1.5 Asymmetric Information

According to Rose, Peter S. and Marquis, Milton H. (2008) asymmetric information is view that disputes the financial marketplaces contains pockets of inefficiency in the availability and use of information.

According to Investopedia, definition of asymmetric information is a situation in which one party in a transaction has more or superior information compared to another (http://www.investopedia.com). Others web sources (http://www.economicshelp.org) also stated that asymmetric information is a situation where there is imperfect knowledge. In particular, it is occurs where one party has different information to another. Asymmetric information should be eliminate through the increased of advanced technology because more people being easily to get information (investopedia.com). Many analysts agree that asymmetric information is harder to come by in developed than developing markets because information in developed markets easily spread timely in everywhere.

According to Rose, Peter S. and Marquis, Milton H. (2008) asymmetric information give consequences for the financial marketplace because there will be variations in both quantity and quality of the information available. But, the important point is that not all the information is good information, just having information that others don't have doesn't make the information more valuable or

even correct (http://www.investinganswers.com). It's supported by Rose, Peter S. and Marquis, Milton H. (2008) that market inefficiency can be created by the presence of imperfect or bad information.

This is the theory where there are two kinds of investors, informed investor and uninformed investors. It can give unequally condition because the informed investor can have more information and knowledge that can give them a better understand and result in decision making to do investment as stated in web sources (http://www.investinganswers.com). It's supported by Rose, Peter S. and Marquis, Milton H. (2008) that in the real word there is no market that either completely efficient or completely asymmetric, this book split the real world market into two segments, which are a highly efficient market that trade by well-informed individuals and institutions trader. The other segment is consisting of less-well-informed small investors' trader, where information is asymmetrically distributed.

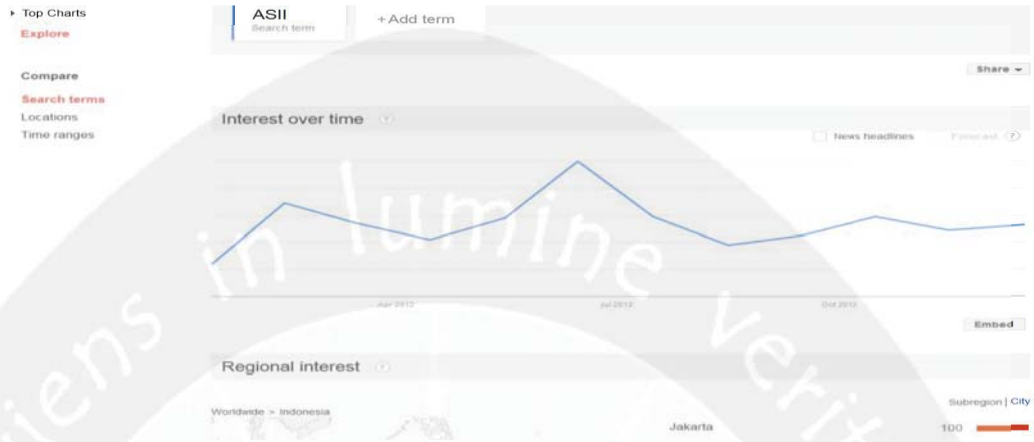
2.1.6 Google Trends

According to WhatIs.com, the definition of Google trend is an online search tool that allows the user to see how often specific keywords, subjects and phrases have been quires over a specific period of time. The result called as "search volume index" that displayed in graph. The data can be save as .csv file and opened in excel (http://whatis.techtarget.com). Google trends is similar with Google Insight, according to Scheitle (2011) this search tool will provide data on the relative frequency of search terms entered by Google users across time and

geographic units. Scheitle (2011) also explain that the number of searches within a particular ecological case (e.g., a state) for a particular term or group of terms during a time period is determined and then will be normalized. Google.com define that the result in Google Trends are normalized to make it easier in comparing the search data and cancel out the variable's effect on the data. Normalized means sets of search data are divided by common variable such as total search. Without normalized, region with the most search volume would always rank highest (https://support.google.com). Scheitle (2011) also explain that the search that have highest rate with the "search term" will give a score of 100, the scale is from 0-100. These data are obviously based on the population using the Internet or, more precisely, the population of Internet users conducting searches on Google.

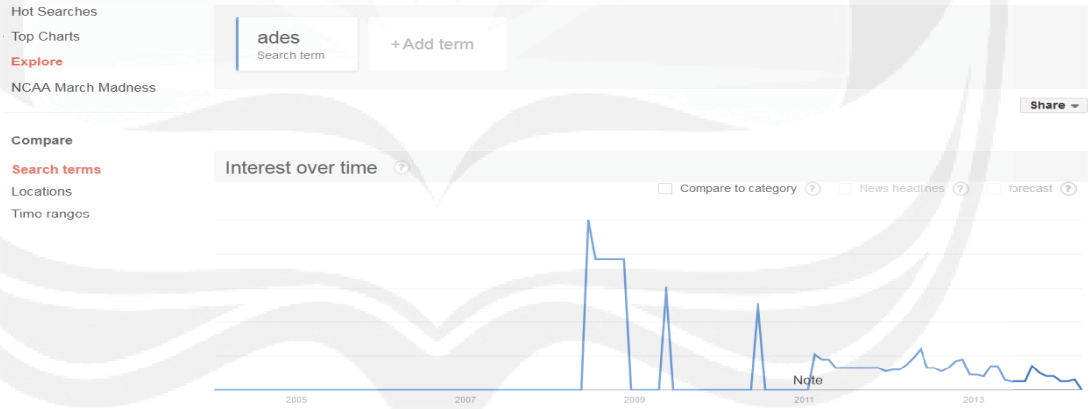
The researcher interested to use the search volume index from Google trends as the direct proxy for attention because from the search volume index we can see the frequency for a term that searched by the people, its supported by scheitle (2011) that if people are concerned or interested in a particular issue, they will be more likely to search for resources, news, websites, discussion boards, and other types of information related to that issue. As interest goes up or goes down over time, these searches will increase or decrease as well.

Figure 3
Graph of Google Trend for ASII stock ticker in Indonesia in the year 2012



Sources: www.google.ocm

Figure 4
Graph of Google Trend for "Ades" keywords in Indonesia in the year 2005-2012



source: www.google.com

Figure 5
Graph of Google Trend for "Ades" Regional interest search in Indonesia in the year 2005-2012

Source: www.Google.com

Figure 6
Graph of Google Trend for "Ades" Related searches terms in Indonesia in the year 2005-2012

Sources: www.google.com

2.1.7 Liquidity

According to Bodie *et al.* (2008) liquidity is the speed and ease with which an asset can be converted to cash. It is a relationship between the time dimension and the price dimension of an investment asset. Based on Investopedia (http://www.investopedia.com) definition of liquidity is the degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid assets. Other definition is the ability to convert an asset to cash quickly which also known as "marketability."

According to Rose, Peter S. and Marquis, Milton H. (2008) a liquid financial asset is readily marketable, which is mean that the assets can be sold quickly. It is related to assets' price and generally carries lower yields, stable price and reversibility. Liquidity can be measure by bid-ask spread, trading volume, frequency of trades, and average trade size. Liquid instrument will have higher in trading volume, trading frequency, and average daily trade size.

Wyss, Rico von (2004) also explain that liquidity measures are separated into one-dimensional (only one variable in one measure) and multi-dimensional ones (different variables in one measure). The one-dimensional liquidity measure is separated into four groups such as: size of the firm, the volume traded, the time between subsequent trades or the spread.

According to Tripathy, naliniprava (2011) trading volume tends to be higher when stock prices are increasing; its changes reflect the available set of relevant information perceived by the market. This research found significant contemporaneous relationship between return volatility and trading volume that indicate the information may flow simultaneously rather than sequentially into the market. The study also found that trading volume is associated with an increase in return volatility and this relationship is asymmetrical. The study revealed that shocks in stock returns impact trading volume in the expected direction over a short horizon. According to Pathirawasam, C. (2011). Higher volume in the market leads to a shorter time needed for trading a predefined amount of shares. So when trading volume is high this is a sign of high liquidity.

2.1.8 Return and Risk

According to McMillan *et al.* (2011) return is defined as the reward for undertaking the investment, it is the motivating forces in the investment process. There are two components of return which are; yield that is the income component of a security's return and second is capital gain (loss) which is the change in price on a security over some period of time.

According to Drake, Pamela Peterson and Fabozzi, frank J. (2009) risk is derived from Italian verb *riscare* which means "to dare". Investors "dare to" get profits by taking advantage of opportunistic side of risk. According to Damodaran, Aswath (2012) risk in finance is defined in term of actual return on an investment around an expected return, even when those returns represent positive outcomes. According to McMillan *et al.* (2011) there are some sources of risk, such as:

a) Interest Rate Risk: changes in the level of interest rate that resulting on the variability in security's return.
b) Market Risk: fluctuations in the overall market that makes variability in return.
c) Inflation Risk: the chance that purchasing power of invested money will decline.
d) Business Risk: the risk of doing business in a particular industry or environment
e) Financial Risk: it is associated with the use of debt financing. The variability in the return getting larger if the proportion of asset financed by debt is larger.
f) Liquidity Risk: this risk higher when the investment can't be sought or sold quickly.
g) Currency Risk: this risk face by all investors who invest internationally related with the uncertainty of return after convert the foreign gains to the own currency.

h) Country Risk: it political referred as political risk, this risk related with economy stability.

According to Jones, Charles P. (2009), Fabozi, Frank J. and Drake, Pamela Peterson (2009) and McMillan *et al.* (2011) define that there are two risks that must be consider when investor deal with investment. The first is systematic risk, risk that cannot be diversified no matter the investor does or it called nondiversifiable risk, such as interest rate, inflation, economic cycles, political uncertainty, and natural disaster. Second is unsystematic risk, which is risk that can be eliminated by diversification or it called diversifiable risk.

Risk can be measure using variance and standard deviation. Variance is absolute measure of dispersion. Standard deviation is a measure of the dispersion in outcomes around the expected value.

2.1.9 Relation between Investors' attention with Liquidity

Da *et al.* (2009) discovered that Google search volume is closely related to the trading by individual investors. It shows the intense effect on the trading behaviors of investors. According to Tripathy, Naliniprava (2011) trading volume and its changes described the available set of relevant information perceived by the market. This research concludes that trading volume is related with the stock return volatility. High trading volume is related with high stock return volatility. It is also define that news which received by the investors is give effect on the stock return volatility. Good news increasing the stock return volatility leads to increase trading volume. According to Chae (2002) investor attention can be seen from the

stock price that influenced the information that flow in the market. Information itself can decrease the asymmetric information and make the stock more liquid. Here, there is positive relation between investor attention and liquidity.

2.1.10 Relation between Investors' attention with Return and Risk

According to Ross *et al.* (2009) define that individual expects a stock to earn over next period is called expected return. According to Fama and French (1992) variables that can explain the average return is size and book to market equity and it is also the proxy of common risk factors in return. Investors want to invest in investment is to get higher return and a low standard deviation (risk). Ross *et al.* (2009) explain that return on any stock consists of two parts such as normal or expected return and the uncertain or risky return on the stock. Normal return or expected return can be predict by investors depend on the information that have by investors and bear on the stock. Uncertain or risky return on the stock is part that comes from information that will reveal within the month. Ashraf, M.A and Joarder, H.R (2009) stated on their research that informed investors could be more advantageous than uninformed investors in averting risk. Risk is related with uncertainty, according to Andre, Daniel and Hasler, Michael (2013) when investor pay attention to news the uncertainty will decrease and the estimated growth rate is increasing and vice versa.

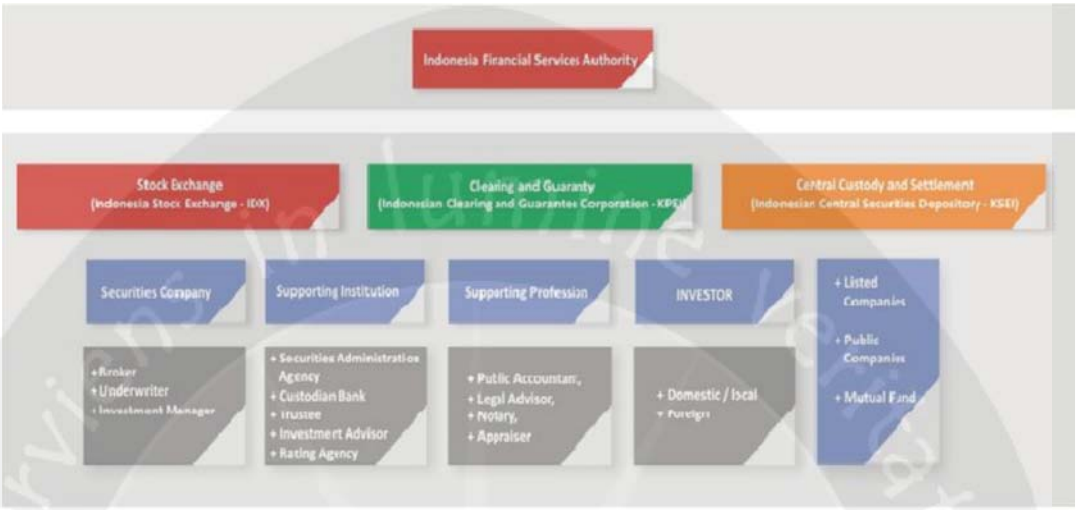
In portfolio theory we learn about high risk high return, some investors willing to invest their funds in high risk investment because they expected the high return from that investment. There is positive relation between risk and

return. Stocks that high demand and supply will tend to be more fluctuate and indicate that many investors interested on that stock. The fluctuation of stock price is describing the information that flow in the market. So there is a positive relation between information that investors have with the return and risk of investment.

2.1.11 Indonesia Stock Exchange

Indonesia capital stock market was started in the year 1912 in Batavia (nowadays known as Jakarta) during the Dutch colonial era. It known as Batavia Stock exchange or Jakarta Stock exchange (JSC) and it was use for the Dutch interest. It was re-active by the President Suharto on the August 10, 1997 and supervised under the Bapepam as the capital Market supervisory Agency. On the July 16, 1989 Surabaya stock exchange was established and then merges with Jakarta Stock exchange in the year 2007. The name changed becomes Indonesia Stock Market (IDX). There are two equity trading systems, first is Jakarta Automated Trading System (JATS). Jats first launch in the year 1995 and renew on March 2, 2009. It uses to handle all financial products such as stocks, bonds, and derivatives. Second are Order-Driven Market and Open-Auction System. This system is based on an order-driven market system where only limit orders with day or session order duration are accepted. People who can trade in the exchange are the Only IDX Members who are already registered as the Members of the Indonesian Clearing and Guarantee Corporation (KPEI).

Figure 7
Indonesia Capital Market Structure



Sources: www.idx.co.id

Indonesia Capital Market Structure as regulated by Law No. 8 Year 1995 concerning Capital Market

Table 2
Indonesia Stock Exchange trading hours on regular market

Day	1st Session	2nd Session
Monday – Thursday	09:00:00 to 12:00:00 WIB	13:30:00 to 15:49:59 WIB
Friday	09:00:00 to 11:30:00 WIB	14:00:00 to 15:49:59 WIB

Sources: www.idx.co.id

Pre-opening schedule

Time	Agenda
08:45:00 - 08:55:00 WIB	The Exchange Members input the buying and selling orders.
08:55:01 - 08:59:59 WIB	JATS processes the pre-opening price forming and allocates every done transaction.

Sources: www.idx.co.id

Pre closing and post trading session

Session	Time	Agenda
Pre-Closing	15:50:00 - 16:00:00 WIB	The Exchange Members input the buying and selling orders without the bid-ask information displayed.
	16:00:01 - 16:04:59 WIB	JATS processes the pre-closing price forming and allocates every done transaction.
Post-Trading	16:05:00 - 16:15:00	JATS processes the allocates transaction with closing price.

Sources: www.idx.co.id

2.1.12 India Stock Exchange

National Stock Exchange of India (NSE) was promoted by leading Financial Institutions at the behest of the Government of India and was incorporated in November 1992 as a tax-paying company and recognized as a stock exchange on April 1993. The National Stock Exchange (NSE) operates a nation-wide, electronic market, offering trading in Capital Market, Derivatives Market and Currency Derivatives segments including equities, equities based derivatives, Currency futures and options, equity based ETFs, Gold ETF and

Retail Government Securities. Today NSE network stretches to more than 1,500 locations in the country and supports more than 2, 30,000 terminals.

Trading on the equities segment takes place on all days of the week (except Saturdays and Sundays and holidays declared by the Exchange in advance). The market timings of the equities segment are:

Table 3
India Stock Exchange trading hours

A) Pre-open session

Order entry & modification Open :	**09:00 hrs**
Order entry & modification Close :	**09:08 hrs***
*with random closure in last one minute. Pre-open order matching starts immediately after close pf pre-open order entry.	

Sources: www.nseindia.com

B) Regular trading session

Normal / Retail Debt / Limited Physical Market Open :	**09:15 hrs**
Normal / Retail Debt / Limited Physical Market Close :	**15:30 hrs**
Block deal session is held between	**09:15 hrs** and **09:50 hrs**

Sources : www.nseindia.com

C) The Closing Session is held between **15.40 hrs** and **16.00 hrs**

2.2 Previous Research

According to Barber and Odean (2008) attention is a scare resource. First, select the option to consider then decide which option to choose is the process in making decision. This research was test that individual investors are often ignored options that do not attract attention and decide to buy or sell options that catch the

investors' attention. There are two kinds of investors which are informed investor that observed the same signal weather want to buy or sell and uninformed investor that make a random purchase or random sales. This research was used indirect proxies to measure the investors' attention such as : news, unusual trading volume, and extreme returns. The researcher also stated that trading volume is greater when news about a firm a reach investors and the important news often result in significant positive or negative returns. Barber and Odean (2008) explain that investors are overconfident about the quality of their information that makes them trade too much. Information is needed to do investment but we have to make sure that we use the appropriate information. Such investors' trades sub optimally because they may overvalue the importance of events that catch their attention. This research was concluding that when alternatives are many and search cost high, attention may affect choice decision that preferences.

According to Da *et al.* (2009) extreme returns, trading volume, news and headline, and advertising expense are indirect proxies for investor attention but return can be driven by factors unrelated to investor attention and news doesn't guarantee unless investor actually read it. This research proposes a direct measure of investor attention using search frequency or search volume index (SVI) in Google. The reason is because internet users commonly uses search engine to collect information and Google continues to become the favorite of the search engine. Da *et al* (2009) discovered that Google search volume is closely related to the trading by individual investors. It shows the intense effect on the trading behaviors of investors. Search volume index is able to capture public attention

that is not capture by news; it is capturing the demand for attention or active attention on a real time basis. Investors can be search information in Google using company ticker or company name. This research examines weekly SVI of Russell 3000 individual stocks from January 2004 to June 2008 for individual investors. In this research, individual investors are more active to search information when they tend to buy stock because they have to choose from so many alternatives and it will push up stock price temporarily.

Bank, M., & Peter, George. (2011) conducted a research about investor attention that using Google search volume as the direct proxy and study the implication for trading activity, liquidity, and returns of German stocks. This research found that search volume is a powerful measure for investor attention especially uninformed investor. The higher the search volume will increase the trading activity, improve liquidity stock and high future return in short run. This research using company name that took from Thomson reuter data streams as the keyword search to get data of Google search volume index.

Usman, B. (2012) conducted a research about the Investor attention using Google search traffic and its influence on return, liquidity, and volatility of stock return for manufacturing firm in Indonesia. This research concludes that Google search volume reduces the asymmetry information between informed and uninformed investors. High search of information help investors make decision that impact on liquidity improvement, and the increasing liquidity affect the volatility returns.

Below is the summary of previous research:

Table 4
Summary of previous research

Author(S)	Variable(s)	Result(s)
Barber, B.M. and Odean, T. (2008), "all that glitters: the effect of attention and news on the buying behavior of individual and institutional investors", Review *of Financial Studies*, Vol. 21 No. 2, pp. 785-818.	Abnormal trading volume Return News	Investors display attention driven buying behavior.
Da, Z., Engleberg, J., & Gao, P. (2009). In Search of Attention. *The Journal of Finance.*	Google search volume Returns of IPO stocks	Google search volume is captures the active attention of retail investors. The change in search volume is related to trading behavior of investors. Increasing of search volume temporary will push up stock prices.
Bank, M., & Peter, George. (2011). Google Search Volume and Its Influence on Liquidity and Returns of German Stocks. *Financial Market Portfolio Management*. Pp239-264	Google search volume Returns Liquidity	Search volume primarily measure attention from uninformed attention. Increase in search volume is associated with temporarily higher future returns.
Usman, B. (2012). "pengaruh google search trafic terhadap return, likuiditas dan volatilitas return saham studi empiris: perusahaan sektor manufaktur di bursa efek indonesia". Universitas Gajah Mada. *Thesis*	Google search volume Return Liquidity Return Volatility	Google search volume reduces the asymmetry information between informed and uninformed investors. High search of information help investors make decision that impact on liquidity improvement, and the increasing liquidity affect the volatility returns.

2.3 Hypotheses

According to Tripathy, naliniprava (2011) when trading activity increase it tend to push the stock price increase. According to Da *et al.* (2009) increasing on search volume will increase the trading volume and push up the stock price in the short run. Fang and Peres (2009) also explain that investors' attention to advertisement also have positive impact to return. When investors have more information about company, the asymmetric information will tend to decrease.

Positive relation between investor attention, return and trade volume also the decrease of asymmetric information, help the researcher to build the first hypothesis as:

H.1 a : Attention has positive influence to stock return of manufacture companies in Indonesia

H.1 b : Attention has positive influence to stock return of manufacture companies in India

Bank, M., & Peter, George. (2011) conclude that internet search volume is not only captures internet user attention but also related trading activity. According to Rose, Peter S. and Marquis, Milton H. (2008) trading volume is one of the measurements of liquidity. Trading volume indicate that the instrument is actively trade by the investors. High trading volume means that the demand and supply of this instrument is high on the market and its means that investors attracted by this instrument. When investors are interesting to that stock, they will tend to search the information about that stock. From that reasons the researcher

can conclude that searching activity that did by investors will have positive relation to the liquidity.

H.2a : Attention has positive influence to the stock liquidity of manufacture companies in Indonesia

H.2b : Attention has positive influence to the stock liquidity of Manufacture Companies in India

When investors do the investment, they expected higher return, but there is a risk that must be consider by them. In finance we know the principle that high return high risk, which is means that to get high return we have to deal with high risk. Tripathy, naliniprava (2011) found that there is relationship between return volatility and trading volume that indicate the information may flow simultaneously on the market.

Risk become one consideration factors when an investors want to invest in capital market. Stock price fluctuation happens because there is much information that received by the investors. Information that flow in the market could make the stock price on the highest point or lowest point that makes the stock have a risk that must be consider by the investors. Investors could see the risk from the stock return volatility, and from above description below is the third hypothesis:

H.3a : Attention has positive influence to the return volatility of manufacture companies in Indonesia

H.3b : Attention has positive influence to the return volatility of manufacture companies in India

Bank, M., & Peter, George. (2011) conducted a research about investor attention for trading activity, liquidity, and returns of German stocks. The result of this research found that the higher the search volume, it will increase the trading activity, improve liquidity stock and high future returns in short run. There is positive relation between investor attention and trading activity, liquidity and return of German stocks. Usman (2012) conduct a research about the investors' attention for return, liquidity, and return volatility in manufacture companies in Indonesia. The result of that research is that high search of information help investors make decision that impact on liquidity improvement, and the increasing liquidity affect the returns volatility. Indonesia and India are emerging market that become a members of G20 (http://internasional.kompas.com) and the growth of internet users in these two countries are similar (https://www.google.com/publicdata). From the above description below is the fourth hypothesis:

H.4a : Indonesia and India has the same result on the influenced of Investors' attention to the return, liquidity, and return volatility

H.4b : Indonesia and India has different result on the influenced Investors' attention to the return, liquidity, and return volatility