THE IMPACT OF MACROECONOMIC VARIABLES ON STOCK RETURN OF RESTAURANT, HOTEL, AND TOURISM SUB-SECTOR LISTED IN INDONESIAN STOCK EXCHANGE (IDX)

(Undergraduate Thesis)

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ABSTRAK

THE IMPACT OF MACROECONOMIC VARIABLES ON STOCK RETURN OF RESTAURANT, HOTEL, AND TOURISM SUB-SECTOR LISTED IN INDONESIAN STOCK EXCHANGE (IDX)

Oleh

FINA SILVIA SARI

Penelitian ini menganalisis variabel makroekonomi sebagai faktor yang mempengaruhi return saham. Sampel yang digunakan adalah perusahaan sub-sektor restoran, hotel, dan pariwisata yang terdaftar di Bursa Efek Indonesia (BEI) selama tahun 2001-2021. Observasi yang diperoleh dalam penelitian ini sebanyak 126 observasi yang terdiri dari 6 perusahaan dengan periode 21 tahun (2001- 2021). Penelitian ini menggunakan metode kuantitatif dengan asumsi klasik. Penelitian ini menemukan bahwa: (1) tingkat inflasi tidak berpengaruh terhadap return saham, (2) nilai tukar berpengaruh secara negative terhadap return saham, (3) suku bunga berpengaruh negatif terhadap return saham, dan (4) jumlah uang beredar berpengaruh negatif terhadap return saham.

Kata Kunci: Return Saham, Tingkat Inflasi, Nilai Tukar, Suku Bunga, Jumlah Uang Beredar

ABSTRACT

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By

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This research analyzes macroeconomic variables as factors that influence stock returns. The samples used were restaurant, hotel and tourism subsector companies listed on the Indonesia Stock Exchange (BEI) during 2001-2021. The observations obtained in this research were 126 observations consisting of 6 companies with a period of 21 years (2001-2021). This research uses quantitative methods with classical assumptions. This research found that: (1) the inflation ratehas no effect on stock returns, (2) the exchange rate has a negative effect on stock returns, (3) interest rates have a negative effect on stock returns, and (4) the money supply has a negative effect on stock returns.

Keywords: Stock Return, Inflation Rate, Exchange Rate, Interest Rate, Money Supply

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Undergraduate Thesis

As one of the requirements for achieving a degree

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Dengan ini menyatakan bahwa penelitian ini adalah hasil karya saya sendiri, dan dalam skripsi ini tidak terdapat keseluruhan atau sebagian tulisan dari orang lain yang saya ambil dengan cara menyalin atau meniru dalam bentuk rangkaian kalimat atau simbol yang menunjukan gagasan atau pendapat pemikiran dari peneliti lain tanpa pengakuan peneliti aslinya. Apabila di kemudian hari terbukti bahwa pernyataan ini tidak benar maka saya sanggup menerima hukuman atau sanksi sesuai dengan peraturan yang berlaku.

Bandar Lampung, 02 Oktober 2023

Peneliti

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BIOGRAPHY

The researcher was born in Kalianda on June 7^{th} 1999, as the first child of Rusmaidi and Masiyah. The researcher has a younger brother named Angga Prima Nata. The researcher started formal education at TK Dharma Wanita which was completed on 2005, and then continued to elementary school at SD Negeri 01 Bumi Sentosa (2005-2011), junior high school at SMP Negeri 1 Kalianda (2011-2014), and vocational high school at SMK Negeri 1 Kalianda (2014-2017).

In 2017, the researcher continued her education and accepted into Management Department of Economic and Business Faculty, University of Lampung. The researcher then chose concentration to financial management and accepted as one of the students in International Class 2017. The researcher was active in some campus organizations, such as; AIESEC in Unila as last promoted position was Human Resources and QualityManager of OGTE (2019), ROIS FEB as last promoted position was Wakil Ketua BSO KSEI FoSEIL (2019), and FoSSEI Sumbagsel as last promoted position was Ketua Bidang Srikandi (2019).

The researcher was also active in regional, national, and international events. The researcher was appointed as a committee in national project named Hometown Project in 2018 and a committee of regional conference named Lampung Youth Conference in 2019. The researcher also participated on online short course program as exchange participant held by Aoyama Gakuin University Japan in 2020.

MOTTO

"Maka apabila engkau telah selesai (dari sesuatu urusan), tetaplah bekerja keras (untuk urusan yang lain)."

(Q.S. Al-Insyirah: 7)

"Jika Allah mengabulkan doaku maka aku akan bahagia, tetapi jika Allah tidak mengabulkan doaku maka aku lebih bahagia. Karena yang pertama adalah pilihanku, sedangkan yang kedua adalah pilihan Allah"

(Ali bin Abi Thalib)

"If you must look back, do so forgivingly.

If you must look forward, do so prayerfully.

However, the wisest thing you can do is be present in the present, gratefully."

(Maya Angelou)

DEDICATION

Bismillahirrahmanirrahim.

I express my gratitude to the almighty Allah SWT for His blessing, hence I could complete this undergraduate thesis properly. I present this thesis to:

MY FAMILY

My mother, Masiyah, who always love me in every way I could possibly ask. I express my deepest gratitude for your faith and support in every step of my life including finishing my bachelor education. I also want to express my gratitude to my only brother and my two sisters as I wish to be the role model for them. Lastly, I would like to express my gratitude to my grandfather and grandmother who has been my secondary parents and support me throughout my journey for years. This thesis can not be done without all of my support system. Therefore, I hope this thesis can be well accepted as a gift for them and would make them feel proud of me.

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Praise Allah SWT for all the abundance of grace and gifts, hence the researcher can complete the thesis entitled **"The Impact of Macroeconomic Variables on Stock Return of Restaurant, Hotel, and Tourism Sub-Sector Listed in Indonesian Stock Exchange (IDX)"**. This thesis is one of the requirements for completing education and obtaining a Bachelor of Management degree at the Faculty of Economics and Business, University of Lampung.

During the process of completing this thesis from start to finish, the researcher received helps and supports from various parties. Therefore, in this opportunity,the researcher would like to express her gratitude to:

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13. My beloved almamater, University of lampung.

Finally, the researcher realizes that this thesis is far from being perfect. But the researcher hopes this thesis can be useful for readers and future researchers. Amen.

Bandar Lampung, 7 Oktober 2023

Researcher

Fina Silvia Sari

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I. INTRODUCTION

A. Background

The capital market has a vital role in the economic condition of a country. There are various roles in the capital market, which include facilitating investors and the company to determine share prices, providing investors with the opportunity to determine the expected results, providing opportunities for investors to resell their shares, establishing an opportunity for the community to participate in the economic development of a country, and reducing the information and transactioncost of shares.

The capital market carries out two functions, namely, the economic function and the financial function. In economic function, the capital market provides a facility to transfer funds from parties with excess funds to parties who need funds. Investors may invest in several companies through the capital market by purchasing new securities offered or traded in the capital market. From a financial perspective, the capital market provides the opportunity to gain profits for the owner of funds, known as a stock return. Stock return is the level of profit gained by investors on investments they make (Robert, 2001).

The capital market is an alternative collection of funds other than the banking system. The advantage of the capital market compared to the banking system is that the capital market raises funds not only by collecting debts, but also by participating in the capital so that the value of debt to equity ratio can be efficient.

Investors who invest in capital market have the same goal which is to maximize the return. For investors, stock return is a measurement of the stock value. The greater the return obtained, the greater the attractiveness of a stock. Markowitz (1959) stated that investment decisions made by investors are based on expected return and variance of return (as a measure of risk). Investors are willing to accept greater risk but must be compensated with the opportunity to earn a higher return. Thus, before investing, in addition to calculating the returns that will be obtained, investors also need to consider the level of risk that must be faced as a basis for making decisions in investing.

Generally, there are two models used for decision making by investors to calculate the level of risk and expected return of stocks, namely Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT). The Capital Asset Pricing Model (CAPM) is a model for determining the price of an asset at equilibrium conditions. In an equilibrium state, the level of profit signaled by investors for a stock will be affected by the risk of the stock (Husnan, 2005). According to CAPM, the risk assessed by rational investors is only systematic risk because the risk cannot be eliminated by diversification.

Meanwhile, Ross formulated a theory called Arbitrage Pricing Theory (APT). APT basically uses the idea that two investment opportunities that have the same characteristics cannot be sold at different prices (Husnan, 2005). The Capital Asset Pricing Model (CAPM) predicts that there is only one type of systematic risk that affects stock returns, namely market risk, while the Arbitrage Pricing Theory (APT) Model is based on the view that the expected return for a stock (security) will be influenced by several risk factors, including macroeconomic factors.

Macroeconomic factors are aim to view macro conditions in a country's economy. Macroeconomic factors operate on a large scale of economic issues that imply nearly the overall economic condition of a country. Therefore, macroeconomics is essential in economic growth, particularly in businesses and companies. When economic condition in a country decline, the stock returns would likely reflect a comparable decline, so investors tend to withdraw their investment.

Investors would be interested in investing their money in the stock exchange if the economic condition of a country grows sustainably with sufficient macro variables, such as controlled inflation and stable monetary situation. Therefore, investors need to assess economic conditions for their implications in the capital market.

However, macroeconomic variables have different indicators in each country depending on the economic situation (Sudarsono and Sudiyatno, 2016). Ndlovu et al. (2018) in their research used money supply growth, interest rates, and exchange rate to analyze stock returns in South Africa. Jamaluddin et al. (2017) stated that money supply, exchange rate, and inflation are the variables thatalready tested to be relevant and significant applied in ASEAN countries (Singapore, Malaysia, and Indonesia). Meanwhile, there are several studies in Indonesia found that the macroeconomic variables that have impact on stock return are inflation, exchange rate, interest rate, and money supply (Assagaf et al., 2019, Sukmayana et al., 2020, Utama and Puryandani, 2020).

Assagaf et al. (2019) investigate the effect between macroeconomic variables on stock return of overall companies listed in Jakarta Composite Index from 2016 until 2018. The chosen macroeconomic variables are inflation, exchange rate, interest rate, and money supply. This study found that in short period the inflation rate and money supply have positive and significant effect on stock return, meanwhile interest rate and exchange rate have negative and significant effect on stock return.

Furthermore, previous research by Sukmayana et al. (2020) found that inflation has negative and significant effect on stock return, while interest rate and exchange rate have positive and significant effect on stock return. This research conducted in long period of time within 11 years during 2009 until 2020.

Meanwhile, Utama and Puryandani (2020) investigate the relationship between macroeconomic variables on stock return. The chosen macroeconomic variables are

BI rate, exchange rate, and gold price. The study found that BI rate and exchange rate has significant effect on stock return while gold price has no significant effect on stock return.

Nowadays, services sector, especially hospitality and tourism, have a vital position to help the development of economic growth in Indonesia. The tourism sector is also one of the strategic factors that can increase public income in Indonesia.

Foreign visitor arrivals (including tourists and business people) have been increasing since 2000. The increasing value of foreign visitor arrivals causing the demand for hotels, restaurants, and other infrastructure increases frequently. These demands in the tourism industry impact the company's consideration to establish innovative and creative development for tourism sector to become the market leader in the country. Table 1.1 below display the most visited destinationsfor tourism in Indonesia according to World Data Info in 2019.

TABLE 1.1 MOST VISITED DESTINATIONS FOR TOURISM ACCORDING TO WORLD DATA INFO OF TOURISM IN 2020

City	Tourists	Rank
Denpasar	8,582,800	#28
Jakarta	4,703,000	#54
Batam	2,850,800	#85

Source: World Data Info, processed

Based on the Table 1.1, three cities in Indonesia are listed as the top most popular destinations worldwide. These three destinations become the main entry points for foreign visitor arrivals in Indonesia. First destination is Denpasar which reached 28nd place with 8.58 million tourist arrivals. Bali was considered the island of arts and culture and the beautiful nature view of Indonesia. Therefore, many foreign tourists tend to spend their vacations in Bali.

The second destination is Jakarta which reached 54th place with 4.70 million tourist arrivals. Jakarta was the economic center of Indonesia. Many foreign tourists start their holiday by visiting and staying in Jakarta before they explore the other side of Indonesia. The last popular destination in Indonesia is Batam. The rapid development and industrial sector in Batam have made Batam become a strategical place among Indonesia, Malaysia, and Singapore in tourism sector. Therefore, according to World Data Info of Tourism, Batam reached 85st as the most visited destination with 2.85 million tourists.

This data showed that some places in Indonesia has gained recognition from all around the world about tourism potential looking from many tourists visited three most popular places in Indonesia. Indonesia also ranked 21th for the most popular travel countries according to World Economic Forum's Travel & Tourism Competitiveness Reportin 2020. However, this ranking was below Malaysia (18) but Indonesia hadovercome other ASEAN countries position such as Vietnam (24) and Philippines (33). The report stated that the competitive advantage comes from travel and tourism policy, natural and cultural resources, and international openness.

However, the report also showed Indonesia's deficiencies in terms of environmental sustainability which causes deforestation and the extinction of species. The tourism infrastructure in Indonesia needed to be well distributed. Bali and Jakarta have good infrastructure, but other regions' infrastructure was still inadequate, particularly the allocation of airports, ports, roads, hotels, and restaurants.

Indonesia has a significant potential for the tourism sector supported by natural resources due to an archipelagic state. However, the archipelagic areas required decent transportation facilities among the islands. Another infrastructure that needs to be developed was the hotels and restaurants business. These facilities have a significant role on the tourism condition of Indonesia.

Furthermore, the education of Indonesia's citizens, especially the inability to speak English fluently, forms an obstacle. English speaking ability was mainly required for tour guide business in the tourism sector. Bali and Jakarta have the most English-fluent native people working in the tourism sector compared to other regions. This language barrier has been one of the reasons foreign tourists preferred to choose Singapore or Malaysia as their holiday destination instead of Indonesia.

However, the Indonesian government has made efforts to develop the tourism sector for several years. These efforts included a new visa policy in 2015 and a promotional campaign. Intended to boost Indonesia's tourism industry, the Indonesian government granted an additional 45 countries visa-free access to Indonesia in 2015 (Presidential Regulation no.69/2015 on Exemptions of Visit Visa). In 2016, the number of foreign visitors in Indonesia increased again through the new Presidential Regulation No.21/2016 about Exemptions of Visit Visa. Now 169 countries have visa-free access to enter and stay in Indonesia with a maximum period of 30 days of regulation. Besides visa policy, the government made the promotion through the "Wonderful Indonesia" campaign by the Ministryof Tourism and Creative Economy. The campaign is the proper action to build a positive and good image in the middle of a negative perception of Indonesia due to natural disasters and religious threats such as terrorism.

Furthermore, Indonesia needs to be known as an attractive country instead of just Bali which already has a strong brand image worldwide. Regardless of the considerable potential of the tourism sector and government efforts to promote it, Indonesia still needs to actualize tourism as one of the sectors with a significant role in the Gross National Product (GNP). Table 1.2 below shows the number of tourists yearly and income per tourist in Indonesia.

TABLE 1.2 NUMBER OF TOURISTS AND INCOME PER TOURIST IN INDONESIA FROM 2020-2000

Year	Number of tourists	Receipts	% of GNP	Income per tourist
2020	4.05 m	3.53 bn $	0.33%	872 $
2019	16.11 m	18.40 bn $	1.6 %	1,143 $
2018	15.81 m	17.92 bn $	1.7 %	1,133 $
2017	14.04 m	14.69 bn $	1.4 %	1,046 $
2016	11.52 m	12.57 bn $	1.3 %	1,091 $
2015	10.41 m	12.05 bn $	1.4 %	1,158 $
2014	9.44 m	11.57 bn $	1.3 %	1,226 $
2013	8.80 m	10.30 bn $	1.1 %	1,170 $
2012	8.04 m	9.46 bn $	1.0 %	1,176 $
2011	7.65 m	9.04 bn $	1.0 %	1,181 $
2010	7.00 m	7.62 bn $	1.0 %	1,088 $
2009	6.32 m	6.05 bn $	1.1 %	957 $
2008	6.23 m	8.15 bn $	1.6 %	1,307 $
2007	5.51 m	5.83 bn $	1.3 %	1,059 $
2006	4.87 m	4.89 bn $	1.3 %	1,004 $
2005	5.00 m	5.09 bn $	1.8 %	1,018 $
2004	5.32 m	5.23 bn $	2.0 %	982 $
2003	4.47 m	4.46 bn $	1.9 %	999 $
2002	5.03 m	5.80 bn $	3.0 %	1,152 $
2001	5.15 m	5.28 bn $	3.3 %	1,024 $
2000	5.06 m	4.98 bn $	3.0 %	982 $

Source: World Data Info, processed

In Table 1.2, the number of tourists changed from 5.06 million to the highest number of 16.11 million people in 2019. However, the number decreased again in 2020 due to Covid-19 pandemic. This data also supporting the fact that many countries attracted by the potential tourism in Indonesia.

Table 1.2 also shows the relationship between the tourism sector and GNP in Indonesia. According to Table 1.2, tourism revenues amounted to 4.98 billion USD, or about 3.0% of the gross national product (GNP). The number of tourists in tourism data is about 5.06 million, and each tourist spends 982 USD on average. Within 20 years, the country's dependence on tourism has decreased substantially. This means Indonesia still depends on other sectors in Indonesia. By the last year of the survey before the pandemic in 2020, the number of all tourist income reached 18.40 billion USD or 1.6% of the gross national product. This number of GNP tourists far decreased compared to the beginning year of 2000. Each visitor spends an average of 1,143 USD for their holiday in 2019.

Since COVID-19 virus cases were confirmed in Indonesia on March 2020, the impact of this pandemic started to affect the tourism industry. This pandemic has impacted all industries in Indonesia. The most affected ones are tourism, food and beverage, and retail. As the government's regulation pointed to stop flights to and from China implemented on February 5th, 2020, the travel and tourism industry is struggling to fight the losses due to the regulation. In the first half of 2020, tourism revenue losses reached 85 trillion rupiahs, and hotels and restaurants lost around 70 trillion rupiahs.

The COVID-19 pandemic situation led to a drastic reduction in the number of foreign tourist visitors to Indonesia. According to the article from World Data Info (2020), foreign visitors in Indonesia only reached 4.0052.923 visitors in 2020. This number decreased by 74.84% from the number of foreign visitors in 2019which reached 16.108.600 visitors. There is also a decrease in foreign visitors to Indonesia's three most extensive point entries; Ngurah Rai decreased by83.02%, Soekarno-Hatta experienced a decrease of 82.01%, and Batam decreased by 84.84%.

The development of tourist visitors indicated rapid growth in the tourism industry in Indonesia. This development has made investors believe in the tourism sector's potential. Provided with the government's strenuous efforts in developing and improving infrastructure in the tourism sector, investing in the tourism sector could be a promising alternative for investors.

Hiramsyah Thai as Tourism Ministry's team said that investment in the tourism industry was growing each year and certainly has the potential to become the primary sector to attract investors both local and foreign investors (The Jakarta Post, 27 April 2017). This potential could not be separated from the government and stakeholders' efforts on infrastructure. The government applied five super- priority places for tourism in Indonesia. The destinations are Lake Toba in North Sumatera, Borobudur in Central Java, Labuan Bajo in East Nusa Tenggara, Mandalika in West Nusa Tenggara, and Likupang in North Sulawesi. However, this potential was hindered by the COVID-19 pandemic in 2020, which led to difficulty attracting investors, so developers should adapt to the new way of marketing solutions.

The relationship between macroeconomic variables and stock return of tourism industry has been investigated by previous research in many countries, for example a research by Bogdan (2019) whose investigated the relationship between macroeconomic variable on stock return of tourism in Croatia and a research by Demir et al. (2017) whose investigated the macroeconomic variables on stock return of tourism industry in Turkey.

However, the relationship between macroeconomic variables and stock return of tourism in Indonesia has not been widely investigated by previous research. The relationship between macroeconomic variables and stock return on tourism industry in Indonesia found in previous research by Dwita and Rahmidani (2012) in 2005 until 2010 period. Therefore, the relationship between macroeconomic variables and stock returns specifically on tourism industry in Indonesia is still worthy of research.

According to the research gap described above, the researcher investigated the impact of macroeconomic variables on stock return of restaurant, hotel, and tourism industry in Indonesia with long period of research within 21 years from 2001 until

2021. The chosen macroeconomic variables are inflation rate, exchange rate, interest rate, and money supply. Thisstudy aims to analyze whether there is a significant impact of macroeconomic variables partially on stock return of the restaurant, hotel, and tourism sub-sector. Therefore, the researcher initiated a study with the title "**The Impact of Macroeconomic Variables on Stock Return of Restaurant, Hotel, and Tourism Sub-Sector Listed in Indonesian Stock Exchange (IDX)"**

A. Problem Formulation

Based on the description of that have slid into the background above, the author summarizes the following problems:

1. Does inflation rate (INF) has a significant impact on stock return of restaurant, hotel and tourism sub sector in 2001-2021 period?
2. Does exchange rate (ER) has a significant impact on stock return of restaurant, hotel and tourism sub sector in 2001-2021 period?
3. Does interest rate (IR) has a significant impact on stock return ofrestaurant, hotel and tourism sub sector in 2001-2021 period?
4. Does money supply (MS) has a significant impact on stock return of restaurant, hotel, and tourism sub sector in 2001-2021 period?

B. Research Purpose

Based on the problem formulas that have been formulated above, the objectives of this research are:

1. To examine and analyze the impact of inflation (INF) on stock return of restaurant, hotel and tourism sub sector industry in 2000-2021 period.
2. To examine and analyze the impact of exchange rate (ER) on stock return of restaurant, hotel and tourism sub sector industry in 2000-2021 period.
3. To examine and analyze the impact of interest rate (IR) on stock return of restaurant, hotel and tourism sub sector industry in 2000-2021 period.
4. To examine and analyze the impact of money supply (MS) on stock return of restaurant, hotel and tourism sub sector industry in 2000-2021 period.

II. LITERATURE REVIEW, CONCEPTUAL FRAMEWORK, AND HYPOTHESIS FORMULATION

A. Theoritical Basis

1. Arbitrage Pricing Theory (APT)

According to Yunita et al. (2020), Arbitrage Pricing Theory is the price of an asset that can be influenced by several factors. APT states the *law of one price* which is assets that are similar and dissimilar but have the same characteristics and the same price. If this condition is not fulfilled, investors will take long investments or buy assets at a low price then sell it back in the market for short-time period.

Meanwhile, according to Zubir (2011) APT is the expected return of an asset which has a linear function of various macroeconomic factors and the sensitivity of changes in each factor is expressed by the beta coefficient of each of these factors. According to Rodoni and Yong (2002), APT is still based on the CAPM, but they also consider other factors that affect stock returns.

Therefore, it can be concluded that APT is a model for determining the price of an asset that is influenced by various factors, including macroeconomic factors. Arbitrage Pricing Theory consider macroeconomic factors to calculate the expected return of stocks that can be used by investors to overlook the stock performance of an industry.

According to Murhadi (2009), there are several macroeconomic variables factors that influence stock movements which are inflation, interest rates and exchange rates that suitable with APT calculation. This is supported by study of Dwita and Rahmidani (2012) who investigate the impact of inflation, interest rate, and exchange rate on stock return.

Dwita and Rahmidani (2012) stated if a country experiences changes in macroeconomic conditions, both positive and negative, an investor will consider this condition in making investment decisions. However, APT model also has its disadvantages one of them is the difficulty to determine the relevant risk factors. Because the results will be different or less supportive if using factors that are less relevant.

Ross (1970) stated there are assumptions for Arbitrage Pricing Theory, the assumptions are as following:

1. Asset return can be explained by systematic factors.
   Arbitrage pricing theory claimed that portfolio of assets is diverse, therefore risk factors that influenced stock return can be explained in systematic way according to the history of investment product, the growth rate of the industry and the changes happen in specific period of time.
2. Investors can build a portfolio where specific risk is eliminated.
   By using diversification, identified risks can be eliminated within a portfolio. The main advantage of APT theory is the diversity that allow investor customize their research and suggest multiple sources of asset risks.
3. Investor have the same or homogeneous expectation in the capital market.
   Investor execute trades in capital market to establish one expectation which is to maximize profit.
4. The market is a perfectly competitive market.
   The capital market assumed to have free access for investments, free available information and infinite number of securities is available for all investors.
5. No arbitrage exists
   If arbitrage opportunity occurs, investor will proceed to take advantage from it and lead the market to equilibrium levels.

According to Yunita et al. (2020) indicator and formula used in APT is as follow:

Indicator	Formula	Scale
Investor's expected return	$Ri = R_f + \beta_1 (R_1 - R_f) + \beta_2 (R_2 - R_f) + .. + \beta_n (R_n - R_f)$ R1-n = expected return of inflation rate, exchange rate, interest rate, and money supply	Ratio

Source: journal, adopted.

2. Capital Market

There are many ways to manage asset allocation to be more effective than consumption expenditure, for example, by trading. In this modern era, the trading transaction is not only about tangible goods or the money market but also financial assets such as stocks, bonds, and *Sukuk*, generally referred to as investments. Sunariyah (2004) said that investment is funding for one or more assets owned in the long term with the expectancy of getting benefits in the future.In order to be more effective, these financial assets transaction needs media to facilitate and manage the flow of the trading, a place for all these financial assets called the capital market (stock exchange).

According to Capital Market Law No. 8 1995, the capital market is the activity concerned with public and trade offerings assets/securities, public companies related to securities issued, and institutions and professions related to securities. Mishkin dan Eakins (2000) said the capital market is where longer-term debt and equity instruments are traded.

Generally, there are two main products used by investors. The first main product is the issuance of shares or equity maintained by companies, and the second is the issuance of bonds by the government. The capital market has a function to connect companies or the government and owners of capital with the expectancy of getting profits in the future.

Investments are created by providing capital to companies or the government through the products they issue, such as stocks or bonds. Companies or governments that issue stocks or bonds need investors for their financial needs. A bond issued by a company is considered a private bond other than a government bond. In this private bond, it can be concluded that investors become lenders of funds to companies. The company then manages the borrowed funds to increase its work productivity, promotion, company expansion, or increase working capital.

Data listed that 701 companies have assigned their shares on the Indonesia Stock Exchange (IDX) (Indonesia Stock Exchange, 2020). This figure is projected to increase rapidly if the authorities consistently encourage companies to go public. The increasing number of issuers will encourage the strengthening of the Indonesian capital market sustainably. Furthermore, the Indonesian stock market will increasingly attract large investors in the future.

According to Financial Service Authority (OJK) the number of capital market investors continues to increase every year. In 2019 there was a very significant increase in the number of investors. Previously in 2018, the number of capital market investors was 1.6 million. Then in 2019, the growth of capital market investors increased by 53% from the previous year. The number of investors registered in the capital market increased by 53% and reached 2.4 million SID in 2019. Then in the second quarter of 2020, the number of capital market investors increased again despite the COVID-19 pandemic. Retail investors are expected to experience a growth at an average of 100,000 per month. As of May 2020, the number of Single Investor Identification (SID) reached 2.8 million, which increased by 13% from the end of 2019 (Financial Service Authority Report, 2020).
The capital market is divided into four types, namely as follows:

a. Primary Market

   The primary market occurs when the company sells its securities to general investors before stocks are issued in the primary market. The previous issuer will release detailed information about the company in the primary market. The purpose is to provide information to potential investors regarding the company's status so that investors can understand the company's prospects andinterest in buying securities issued by companies (Tandelilin, 2010).

b. The second market

The second market is where transactions occur by buying and selling securities between investors after the securities are issued in the primarymarket. The secondary market is usually used for trading common stock, preferred stock, bonds, warrants, and securities derivatives (Tandelilin, 2010).

c. Third Market

The third market is where stocks or securities are traded outside the stock exchange. Parallel trading is a security trading system held outside the official stock exchange in the form of a secondary exchange and supervised as well implemented by the Currency Trading Guild and Securities under the supervision and guidance of the finance institution (Sunariyah, 2004).

d. Fourth Market

A fourth market is a form of transaction securities between investors. In other words, share transactions from one shareholder to another occur without going through intermediaries. This form of transaction is usually a large-scale transaction (Sunariyah, 2004).

3. Stocks

According to Fahmi (2013) stocks are paper evidence of participation in equity/fund ownership in a company that clearly stated the nominal value, company name and followed with clear rights and obligations to each holder. According to Hartono (2015) there are three types of stocks:

a) Common stock means that the company onlyissue one type of shares. Common stock gives rights for the holder including control rights, the right to receive profit, and preemptive rights.

b) Preferred stock (preferred stock), is the combination of bonds and common stock.

c) Treasury stock (treasury stock), is shares owned by companies that have ever issued then bought back by company to be kept as treasury which can be resell later.

4. Stocks Return

Return is the level of profit earned by investors for an investment they made. There are investment instruments that do not provide certain rate of return regularly and periodically. Source of return on investment consists of two main components, namely dividend yield and capital gains. Dividend yield is a return component that reflects cash flow or income earned periodically from an investment. Company are not required by law to always pay dividends to commonstock shareholders. The dividends distributed is depends on the size of profits earned by the company.

According to Gumanti (2011) dividend yield calculations can be formulated as follows:

$$\boxed{Deviden\,Yield = \frac{Dt}{Pt-1}}$$

Where:

D_t = Cash dividends paid

$P_t{-}1$ = Stock price in period t-1

While capital gain/loss is an increase/decrease in price of stocks that can provide benefits or losses for investors. Income derived from capital gains is due to the selling price excess the purchase price of the shares. Capital gain occurs when the market price is higher than its cost. Meanwhile capital losses occur when the selling price is lower than the purchase price.

According to Jogiyanto (2013) capital gains/losses can be calculated using the following calculations:

$$\boxed{Capital\ Gain/Losses = \frac{Pt - P(t-1)}{P(t-1)}}$$

Where:

P_t = Stock price in period t

$P_{(t-1)}$ = Stock price in period t-1

Stock returns allow investors to compare the expected returns and the returns provided by various stocks. Moreover, stock returns also have a very significant role in determining the value of stocks. Investors also should consider the performance of the company to reduce the risks that may occur in the investments. According to (Aryaningsihet al., 2018) the calculation of stock returns can be formulated as follows:

$$\boxed{Rit = \frac{Pt - P(t-1)}{P(t-1)}}$$

Where:

Rit = Stock returni period t

Pt = Stock price period t

Pt−1 = Stock price period before t

In the annual data, the calculation of stock returns must consider the value dividend yield distributed by the company. According to Jogiyanto (2013), if there is a dividend then the formula is including dividend, the calculation becomes:

$$\boxed{Rit = \frac{Pt-P(t-1)}{P(t-1)} + Yield}$$

5. Macroeconomic Variables

a. Inflation Rate

McConnell and Brue (2005) stated that inflation is an increase in the general rate of the price. Inflation (inflation) is a symptom showing a sustainable increase in prices. According to Gardner (1973), inflation is a continuous increase in the prices of goods and services in general. Meanwhile, Mankiw (2007) stated that inflation is the increase in all price levels. It means that an increase in the price of certain goods, for example, the increase due to failed harvests, is not considered inflation unless the increase is sustainable or affectsthe other goods.

In most countries, maintaining inflation stability is the responsibility of the central bank. Expected economic growth, employment expenditures, and the availability of goods and services for community demands are impacting the stability of inflation. Inflation occurs because community's demands increase beyond its economic capacity causing an inflationary gap. To establish low inflation, the central bank must control the practical demands of society towards available goods. The limitation of goods quantity occurs because production capacity cannot be developed to keep pace with aggregate demand in the short-term period. Based on the source or causes of rising prices, inflation is divided into three types:

1. Demand-Pull inflation

This inflation usually occurs during the rapidly growing economic condition. A high increase in community's income causes a high expenditure beyond the economic capacity to afford goods and services. This excessive spending on goods has the potential to create inflation.

2. Cost-Push inflation

This inflation also occurs when the economy overgrows and the unemployment rate is shallow.

3. Built-In inflation

This inflation occurs when imported goods experiencing price increases have an essential role in the production activities of companies in the local country.

Indicators that are commonly used to measure the inflation rate are the Consumer Price Index (CPI) proven by many researches before (Ouma and Muriu, 2014, Dwita and Rahmidani, 2012, Jamaludin et al., 2017). This index is based on the prices of the selected goods representing consumer spending patterns. Moreover, CPI used as an economic indicator by the Indonesia’s government to measure the inflation rate (Jamaludin et al., 2017). However, this research used the inflation rate published by Central Bureau of Statistics as the result of CPI calculation itself.

b. Exchange Rate

International trade worldwide causes the exchange of two or more different currencies. This transaction will generate demand and supply of a certain currency which encourages the exchange rate. According to Nopirin (1994), the exchange rate is the price in the substitution of two different currencies which there is a comparison of the value or price between the currencies involved. This comparison of values is called the exchange rate. According to Sukarno (2016), the exchange rate is currency prices against other countries. Meanwhile, Mankiw (2007) stated that the exchange rate is the price level agreed upon by residents of both countries to trade.

There are two types of exchange rate determination mechanisms, which are market mechanism and government determination. When the currency exchange rate of a country is determined based on the market mechanism, the state adopts a floating exchange rate system (floating exchange rate). Conversely, if the government determines the exchange rate, the country follows a fixed rate system.

According to Sukirno (2017), the exchange rate system is divided into two systems, namely:

1. Fixed Rate System

The fixed exchange rate system determines the currency value system in which the central bank sets the prices of various foreign currencies and theprice cannot be changed. The government (monetary authority) can determine the foreign exchange rate to ensure that a real exchange rate willnot negatively affect the economy.

2. Flexible Exchange Rate System

The flexible exchange rate system determines the value of foreign currencies based on changes in demand and supply in the foreign exchangemarket daily.

The type of exchange rate value consists of 4 types, namely:

1. Selling Value (Selling Rate)

A bank determines the following rates for the sale of currency to a certain foreigner at a certain time.

2. Medium Rate (Middle Rate)

The middle rate is the value between the selling rate and buying rate of foreign exchange against national currency determined by the central bank at a certain time.

3. Buying Rate (Buying Rate)

A bank determines the following rates for purchasing currency to a certain foreigner at a certain time.

4. Fixed Rates (Flat Rate)

A fixed rate is the following exchange rate in buying and selling bank notes and traveler's checks.

The measurement of exchange rates in this study uses the middle exchange rate. The middle exchange rate is the exchange rate between the selling rate and buying rate of foreign exchange against the national currency, which has been determined by the central bank at a certain time (Sukirno, 2017). The formula of the middle exchange rate is as follow:

$$\boxed{\text{Middle Rate} = \frac{Kb - Kj}{2}}$$

Description:

Kb = Buying kurs

Kj = Selling kurs

c. Interest Rate

Interest is the price the bank and the customer must pay in consideration of the transaction between the bank and the customer. In banking, there are two types of prices: buying and selling. When the bank buys funds from the customer, the bank will pay a specific price to the customer, namely, deposit interest. On the other side, banks will also sell funds to customers who need funds with a certain agreed selling price. The difference between the selling and buying prices applied in interest on loans and deposits is called the *spread*.

Mishkin and Eakins (2000) defines the interest rate as the cost of the loan or the price paid for the borrowed funds (usually expressed as a percentage per year). Bank Indonesia determines the interest rate following Law number 23of 1999 about Bank Indonesia. Therefore, the interest rate in Indonesia is also referred to as the BI rate.

The BI Rate is the interest rate that reflects the condition or stance of monetary policy set by Bank Indonesia. The BI rate is announced to the public by the Board of Governors of Bank Indonesia througha board governors meeting held every month and implemented in the monetary operations performance in the money market to achieve the operational targets of monetary policy.

Interest rate measures a country's economic activity that impacts current circulation activities such as a bank, finance, inflation, investment, and currency shifting. Bank Indonesia has the authority to monetary policy. Bank Indonesia's responsibility includes setting monetary targets, controlling monetary, and determining minimum mandatory reserve and financing agreements.

In daily banking activities, there are two kinds of interest provided to its customers as follows:

a. Deposit interest

Deposit interest is a stimulus or reward for customers who keep their money in the bank. Deposit interest is the price required to be paid by the bank to its customers, for example, services current accounts, savings interest, and deposit interest.

b. Loan interest

Loan interest is the interest given to borrowers or the price required to be paid by the borrowing customer to the bank.

The interest rate has several functions in the economy, namely:

1. Helping the flow of savings goes to investment direction to supporteconomic growth.

2. Distribute the amount of credit supply. Provide credit funds to supplyinvestment projects.

3. Balancing the money supply and demand from a country.

4. It is an important tool for government policy through its influence on the number of savings and investments.

Many factors influence the interest rate; for example, the determination of the interest rate depends on how big the domestic money market experiences an open system of funds in a country, in the sense that determining the size of a country's financial determination tends to be different. Factors affecting interest rate globally in the country is the interest rate abroad and currency depreciation domestic against foreign currencies that are expected to occur.

d. Money Supply

According to Qomariyah (2015), money is objects that have certain characteristics that are used to facilitate exchange activities and as a legal medium of exchange guaranteed by the authorities (government) and stated under country’s law. Meanwhile, money supply is the total amount of money that circulates and is distributed in a country also has reciprocal value in country’s economy (Sukmayadi and oktaviani, 2020).

There are two types of money supply used in Indonesia (Anggarini, 2014), namely:

a) M1 (Narrow Money) is defined as money that has the highest level of liquidity, which includes currency and demand deposits (Budisantoso and Nuritmo, 2014). The measurement of M1 (narrow money) is as follow:

$$\boxed{M1 = C + D}$$

Where:

M1 = Money Supply (Narrow Money)

C = Currency

D = Demand deposits or checks

b) M2 (Broad Money) is defined as currency circulation that include both demand deposits and quasi money. Quasi money is money formed from domestic private foreign currency savings and time deposits. (Sukirno,2017)

$$\boxed{M2 = M1 + T}$$

Where:

M2 = Money Supply (Broad Money)

M1 = Narrow Money (Currency and demand deposits)

T = Quasi money (Time deposits)

According to Budhi (2001), theoretically the money supply will affect the value of money implemented at the price and product level. When the money supply is bigger than the cost of production then the price will increase and the value of money will decrease. Conversely, if the money supply is smaller than production of goods and services, it will decrease the price level and the value of money will increase.

6. Restaurant, Hotel, and Tourism Sub-Sector Industry

a. Restaurant

The restaurant is a business that provides, serves, and sells food/drinks for the public at their place of business located in part or whole permanent buildings and equipped with tools for the manufacturing process, storage, and serving. Ardiansyah (2020) defined a restaurant as a business engaged in the food and beverage service sector. The operational purpose of the restaurant is to make a profit, but satisfying the customers is also the restaurant's main operational goal.

b. Hotel

Hotel accommodation is the kind of service tourists need in the tourism industry. According to the Ministerial Decree of Transportation No.SK.241/H/70 1970, a hotel is defined as a company that provides services in the form of lodging or accommodation and supporting facilities, such as serving dishes that aim to fulfill comfort and commercialterms. To carry out the provision of good services, hotels can provide basic facilities and services, such as:

1. Provide a place to rest and a bedroom.

2. Provide a place for eating and drinking activities, such as a restaurant or pantry and provide toilet and bathroom.

c. Tourism

Jaswal (2014) stated that tourism is an emerging trend in management. Damanik & Weber (2006) define tourism as activities of the movement of people, goods, and services that are very complex. Meanwhile, according to the Law of the Republic of Indonesia No.9 1990 about tourism, there are several related meanings of tourism:

1. Tourism is a travel activity carried out voluntarily and only temporarilyin nature to enjoy the attraction.
2. Tourists are people who carry out tourism activities.
3. Tourism is everything that has a relationship with tourism, such as the exploitation of tourist objects and attractions and businesses related to this field.

Tourism is a potential sector that must be developed and maintained to encourage a country's development through tourist areas. Tourism has a significant role in the development of Indonesia, especially as foreign exchange income in addition to the oil and gas sector. In other words, any tourism effort is a commercial business with the primary aim of finding a source of income. Along with the times, tourists need not only lodging services and room rentals but also growing service quality and modern facilities. Therefore, the definition of the tourism sector does contain tourism itself and the development of hotels and restaurants to support the operational tourism system.

B. Previous Research

This research id conducted by considering different findings from previous studies, as presented in the following table:

TABLE 2.1 SUMMARIES OF PREVIOUS RESEARCHES

Author(s)	Variables	Objects	Findings
Assagaf et al. (2019)	IndependentVariables: - Inflation Rate - Interest Rates - Money Supply - Exchange Rate Dependent Variable: Stock Returns	Companies listed in IDX during 2016-2019	In short period, inflation rate and money supply have positive significant effect on stock return, while interest rate and exchange rate have negative significant effect on stock returns of companies in IDX.
Utama and Puryandani (2020)	IndependentVariables: - BI Rate - Exchange rate IDR/USD - Gold Price Dependent Variable: Stock Returns	Companies in Indonesia Stock Exchange had entered SRI KEHATI index during 2018 monthly data	BI rate found has a significant positive effect on stock returns The exchange rate has a significant negative effect on stock returns Gold price does not have a significanteffect on stock returns.
Ndlovu et al. (2018)	IndependentVariables: - Inflation - Money Supply - Interest Rate - USD/ZAR Exchange Rate Dependent Variable: Stock Returns	Stock return of Johannesburg Stock Exchange South Africa from 1981 to 2016.	The result found that in the long run, interest rates, money supply and inflation have a positive relationship with the stock return meanwhile the exchange rate have a negative effect to the stock prices.
Sukmayana et al. (2020)	Independent Variables: - Inflation (CPI) - Exchange Rate - Interest Rate Dependent Variable: Stock Returns	Stock return of the Composite Stock Price Index (JCI) during 2009-2020 period.	The results found that inflation has negative significant effect on stock return, while interest rate and exchange rate have positive significant effect on stock return. The results also show the compatibility with Arbitration Pricing Theory (APT).

TABLE 2.1 CONTINUED

Jamaludin et al. (2017)	IndependentVariables: - Money Supply - Inflation Rate(CPI) - Exchange Rate Dependent Variable: Stock Returns	Stock marketin the three selected ASEAN countries (Singapore, Malaysia, Indonesia) in 2005-2015 period.	The result shows that Exchange rate and inflation Rate is found to be significant on stock returns. Meanwhile, Money Supply is found to be insignificant on stock returns.
Yudianto et al. (2018)	IndependentVariables: - USD/IDR Exchange Rate - CNY/IDR Exchange Rate - Inflation - Crude oil Dependent Variable: Stock Returns	Stock return of consumption, financial, infrastructure, trade & services sector listed in Indonesian Stock Exchange from 2009 until 2017.	The results indicate both of exchange rate have a significant negative effect on stock return. Inflation have a significant negative effect on stock return. Crude oil has no significant effect on all sectors.
Sinisa Bogdan (2019)	IndependentVariables: - Inflation (CPI) - Exchange Rate - Tourist arrivals Dependent Variable: Stock Returns	Stock return of hospitality industry listed in Zagreb Stock Exchange in Croatia from 2008 until 2018.	The results found only consumer price index have significant impact on stock returns in the hospitality industry.
Hidayat et al. (2017)	IndependentVariables: - Inflation Rate (CPI) - Interest Rate - Exchange Rate - Money Supply Dependent Variable: Stock Returns	Stock return companies listed on LQ45 index from 2010 until 2015	The result indicates that inflation has negative and significant impact on stock return. Meanwhile, interest rate has positive and significant impact on stock return. Exchange rate and money supply found to has no significant impact on stock return.

TABLE 2.1 CONTINUED

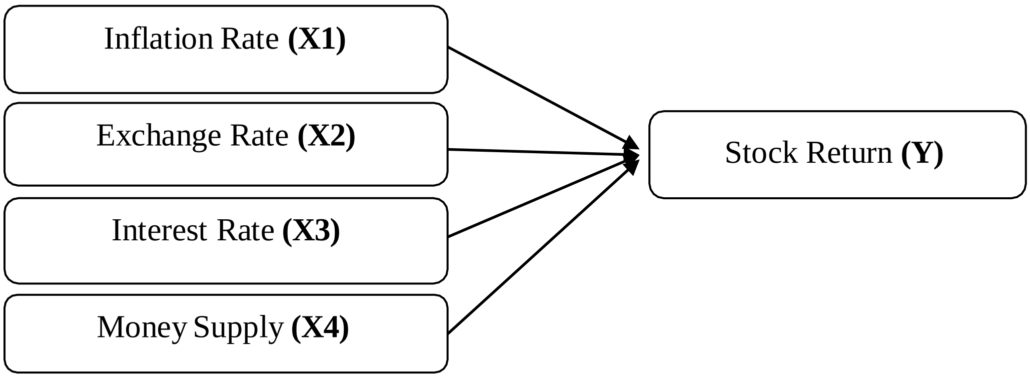
Demir et al. (2017)	Independent Variables: - Inflation Rate (CPI) - Exchange Rate - Money Supply - Tourist arrival Dependent Variable: Stock Returns	Stock return of tourism companies in Turkey from 2005 to 2013.	The results indicate that consumer confidence index, exchange rate, and foreign tourist arrivals have impact on tourism stock returns.
Dwita and Rahmidani (2012)	Independent Variables: - Inflation (CPI) - Interest Rate(BI Rate) - Exchange Rate Dependent Variable: Stock Returns	Companies of Restaurant, Hotel and Tourism Sub-Sector during 2005-2010.	Inflation rate has significant negative influence on stock return. Interest rate has insignificant and positive influence on stock return. Meanwhile exchange rate has insignificant and positive influence on stock return.

Source: Journals and researches, processed

C. Conceptual Framework

Based on background, problems, and literature review that described about macroeconomic and stock return, the conceptual framework can be described as follow:

FIGURE 2.1 CONCEPTUAL FRAMEWORKS



D. Hypothesis Formulation

Based on the formulation of the problem and conceptual framework, the hypothesis can be formulated as following:

1. The Impact of Inflation on Stock Returns

Inflation is a condition where prices increase continuously at a general level. Thus, the increase in inflation will increase production costs of company. When the production costs are greater than the selling price it will make the company experience a loss in income. The increase in inflation also will make companies increase their selling prices then it will lead to the decrease of customer's purchasing power due to the higher price. When the purchasing power decrease, then it will decrease the number of sales. The decrease in number of sales will decrease the company profit which will reflect to the decrease of stock prices followed by the decrease in stock return obtained by investors. Moreover, the decrease in company profit will make a fewer investors interested to invest in the company. Therefore, the relationship between inflation and stock return assumed to be negative. Sukmayana et al. (2019) and Yudianto et al. (2018) also found a negative relationship between inflation and stock returns.

H1: Inflation rate (X1) has negative impact on stock returns.

2. The Impact of Exchange Rate on Stock Returns

Exchange rate is the currency price used by a country to exchange trade with another country. Utama and Puryandani (2020) stated that the increase in foreign currency would reduce the stock return of companies. The increase of USD Dollar to the Rupiah rate indicate that the fundamental factors of the Indonesian economy are weakening. Hence, for investors investments in stocks will be more risker than before. Investors will tend to sell their stocks until the economic condition is better, this selling action by investors will push share prices on the stock exchange to decline, then it will lead to the decrease of stock return gained by investors.

Therefore, the increase in Dollar value is a rotten indication of capital market attractiveness and will lead to a decrease in stock returns. Furthermore, Assagaf et al. (2019), Sukmayana et al. (2020) and Jamaludin et al. (2017) clarified that the exchange rate negatively impacts stock return.

H2: The exchange rate (X2) has negative impact on stock returns.

3. The Impact of Interest Rate on Stock Returns

Utama and Puryandani (2020) said that interest rate changes impact the company's stock return. For companies, an increase in interest rate will cause the increase in company's obligation of interest. Companies with high leverage will be impacted by the increase in interest rates, this will lead to a reduction in company profitability and lead to the decrease in company's stock price. Thus, the stock returns that investors receive will also decrease.

In addition, high interest rates can attract investors to move the funds to deposit investments. This happened because of the increase in interest rates will be followed by commercial banks to raise saving interest rate. If the deposit interest rate is higher than the level of expected return from stock investment, investors tend to choose deposit. The exchange of funds by investors from the capital market to deposits will cause a decline in stock prices. If stock prices fall, the stock returns that investors receive will also decrease. Based on explanation, it assumed that interest rates have a negative impact on stock returns. Moreover, Assagaf et al. (2020) also found a negative relation between interest rate and stock return. Therefore, the relation between interest rate and stock return is assumed to be negative.

H3: Interest rate (X3) has negative impact on stock returns.

4. The Impact of Money Supply (MS) on Stock Returns

Hidayat et al. (2017) stated that demand for money is a rational action. An increase in the demand for money will raise interest rates in the bank. When interest rate increases the investment in securities (stocks) will make capital gain decrease, and when the capital gain decreases it will impact on company stock returns to decrease.

In addition, the increase in money supply will lead to the increase of purchasing demand and will impact to the increase of inflation. When inflation is increasing the production cost of company will also increase and it will reduce the company power in profitability. This will reduce investor's trust to invest in stock market then it will decrease stock price which will reflect to the decrease of stock prices followed by the decrease in stock return obtained by investors.

Therefore, the increase in money supply will impact the stock return to decrease. Hidayat et al. (2017) also found a negative impact between money supply and stock return. Therefore, the relation between money supply and stock return is assumed to be negative.

H4: Money supply (X4) has negative impact on stock returns.

III. RESEARCH METHODOLOGY

A. Type and Source of Data

This research is classified as a quantitative study aiming to analyze the impact of macroeconomic variables on stock return. The object of this research is focused on the restaurant, hotel, and tourism sub-sector listed in the Indonesian Stock Exchange (IDX). The data used in this research is secondary data. Secondary data is a source of research data obtained by an intermediary medium or recorded by other parties. Secondary data in this study include:

1. Stock price data is obtained from the Indonesian Stock Exchange (IDX).
2. Inflation (INF), exchange rate (ER), interest rate (IR), and money supply (MS)are obtained from the Indonesian Bank (BI) and Central Bureau of Statistics.

B. Operational Research Variables

1. Dependent Variable

Dependent variable used in this research is stock return. The stock return has become an important consideration for investors to make investment decisions. The concept of return realization used in this research is capital gain/loss, namely actual return. The formulation for stock return according to Jogiyanto (2017) is:

$$\boxed{Stock\ Return = \frac{(P_1 - P_{t-1})}{P_{t-1}} + yield}$$

Explanation of formula:

P_1 = Closing stock price period 1

P_{t-1} = Closing stock price previous period

yield = Dividend rate

Meanwhile, according to Gumanti (2013) dividend yield calculations can be formulatedas follows:

$$\boxed{Deviden\,Yield = \frac{Dt}{Pt - 1}}$$

Where:

D_t = Cash dividends paid

P_t−1 = Stock price in period t-1

Stock return data is obtained annually from data of stock price from Indonesian Stock Exchange (IDX) by calculating closing price with stock return formula. Meanwhile, dividend yield obtained by data from each company and calculate it with the dividend yield formula.

2. **Independent Variables**

Independent variables impact or cause changes or the emergence of the dependent variable (Sugiyono, 2012). Variable independent used in this study are as follows**:**

a. Inflation Rate

The measurement of inflation in this research is using annually data of inflation rate published in Central Bureau of Statistics official website as the result of CPI calculation by BPS itself. Central bureau of Statistics stated that inflation rate in Indonesia formulated by using Consumer Price Index as the measurement (Central Bureau of Statistics, 2021). Consumer Price Indexis a measurement tool used to calculate the average change in the price of product by monitoring changes in price of each product.

b. Exchange Rate

The exchange rate used in this study isIDR/USD annually data. IDR/USD exchange rate shows the value of Indonesian Rupiah currency which is translated into US Dollar. Due to rapid changes in foreign exchange rates in this study researcher will use the middle rate data of exchange rate published by the Central Bureau of Statistics.

c. Interest Rate

The measurement of interest rate used in this research is the saving depositrate obtained from the BI rate annually. This study used the real interest rate, which is the interest rate that has been adjusted and removed from theimpact of inflation, to reflect the actual cost of funds.

d. Money Supply

Money supply data in this research is using broad money (M2) obtained from Central Bureau of Statistics annual publication. Broad money is combination of the amount of narrow money (M1) and time deposit (Anggraini, 2014):

$$\boxed{M2 = M1 + T}$$

Where:

M2 = Money Supply (Broad Money)M1 = Narrow Money
T = Quasi money (Time deposit)

C. Population and Sample

The population of this study is all companies of the restaurant, hotel, and tourism sub-sector listed in the Indonesian Stock Exchange (IDX) are 35 companies. The samples are determined to be narrowed down by purposive sampling. Purposive sampling is a sampling method of data sources with specific considerations. Based on the sampling method, the research sample data is selected based on the following criteria:

1. Companies of the restaurant, hotel, and tourism sub-sector that have and are still listed in the Indonesian Stock Exchange (IDX) since 2001-2021.
2. Companies listing date in Indonesian Stock Exchange/IPO date are in 2001 or earlier.
3. The trading on every single stock has never been suspended for more than three months.

Based on the criteria above, the samples of this study are as follows:

TABLE 3.1 RESEARCH SAMPLES

No	Code	Stock Name	IPO Date
1	BAYU	PT Bayu BuanaTbk	30 October 1989
2	FAST	PT Fast Food Indonesia Tbk	11 May 1993
3	KPIG	PT MNC Land Tbk	30 March 2000
4	PANR	PT Panorama SentrawisataTbk	18 September 2001
5	PNSE	PT Pudjiadi and Sons Tbk	1 May 1990
6	SHID	PT Hotel Sahid Jaya International Tbk	8 May 1990

Source: data processed

For analysis purpose, data is used for 21 years from the sample companies. Therefore, the observation data would be the number of sorted sample companies multiplied by period of time, thus obtained 6 x 21 = 126 observations.

D. Data Collecting Method

Data collecting method are done by using documentary study from Indonesian Stock Exchange (IDX), Indonesian Bank (BI), and Data of Ministry of Trade report in the period of 2001-2021.

E. Data Analysis Method

For testing the variables, this study used descriptive statistical test, classic assumption tests, and hypothesis testing as follows:

F. Descriptive Statistical Test

Descriptive statistical analysis provides an overview or description of data. This analysis intends to analyze data that describe a social phenomenon in a descriptive manner (Danandjaja, 2012). The measurements seen fromdescriptive statistics included the average value (mean), standard deviation, variant, maximum, minimum, sum, range, kurtosis, and skewness (slope distribution) (Ghozali, 2011).

G. Model Selection

To estimate the regression model for panel data, there are usually three approaches that are used, which include Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

a) Chow Test

Chow test is an F-Statistic test that is used to determine which model is better between the common effect and the fixed effect model. The hypotheses of this test are:

- If the p-value > α then the H0 is accepted while the Ha rejected. It means that the chosen model is common effect model.
- If the p-value < α then the H0 rejected while the Ha accepted. It means that the chosen model is fixed effect model.

b) Langrange Multiple Test

Langrange Multiple test is a test that uses Chi-Square to determine which model is better between the common effect and random effect model. The hypotheses of this test are:

- If the p-value > α then the H0 is accepted while the Ha rejected. It means that the chosen model is common effect model.
- If the p-value < α then the H0 rejected while the Ha accepted. It means that the chosen model is random effect model.

H. Classic Assumption Test

The classic assumption test used in this study is the normality test data and heteroscedasticity test. This test uses the autocorrelation test because the data used are more than one year. This study did not use a multicollinearity test which aimed to test a correlation between variables free (independent) (Ghozali, 2011).

a) Data Normality Test

The normality test is aimed to test whether dependent and independent variables have normal data distribution using the Normal P-P plot. Good regression models tend to have a normal distribution or close to normal. If the data is spread around diagonal lines and follows the direction of the diagonal lines, it shows a normal distribution pattern. Therefore, the regression model will meet a normality assumption (Ghozali, 2011). The basis for decision-making, whether the data is normally distributed or not, is by looking at the below criterion:

- If the histogram graph shows normal distribution pattern and the probability value is > α, then the regression model meets the assumption of normality.
- If the histogram graph does not show the normal distribution pattern and the probability value is < α then, the regression model does not meet the assumption of normality.

b) Heteroscedasticity Test

A heteroscedasticity test is aimed to test whether the regression model occurred inequality of variance from residuals or observations to other experiences using a scatterplot graph. A good regression model is not heteroscedasticity occurs (Ghozali, 2011). The basis for making decisions is if there are specific patternsas dots exist to form a particular regular pattern (wavy, widened, then narrowed), it indicates that there has been heteroscedasticity. If there is no clear pattern and dots spread above and below the 0 on the Y axis, heteroscedasticity will not happen (Ghozali, 2011).

c) Multicollinearity Test

The multicollinearity test is used to see whether there is a correlation between the independent variables. According to Ghozali (2011), this test is (aimed) to prove whether the regression model is found between independent variables. The basis for the consideration of the multicollinearity test is as follows:

- If the tolerance value is more than 10% and the VIF value is less than 10%, there is no multicollinearity between independent variables.

- If the tolerance value is less than 10% and the VIF value is more than 10%, there is multicollinearity between independent variables in the regression model.

d) Autocorrelation Test

Autocorrelation is aimed to test whether there is a correlation between the confounding errors and the disturbing errors in the regression model. By using DW (Durbin Waston) test to detect the absence of correlation between errors, the DW value is expected to be around number 2 (1.5 to 2.5) (Setiaji, 2004). Guide to the D-W (Durbin-Watson) numbers for detecting autocorrelation can be seen by making the following decisions:

TABLE 3.2DURBIN WATSON TEST

D Statistic Value	Result
0<d<dL	There is a positive autocorrelation
dL <d<dU	Cannot be decided
dU<d<4-dU	There is no autocorrelation
4-dU < d < 4-dL	Cannot be decided
4-dL < d < 4	There is negative autocorrelation

I. Multivariate Analysis (Multiple Linear Regression)

Multivariate analysis is aimed to test the impact of independent variables on a dependent variable. This study uses the measurement of the Arbitrage Pricing Theory model which uses multiple linear regressions where the dependent variable is return stocks, and the independent variables are inflation, interest rates, USD exchange rates, and money supply. Multiple linear regression analysis is used to determine the effect of independent variables with the dependent variable, namely: the level of inflation, interest rates and value Exchange of Rupiah, and money supply against the return of stocks of tourism companies listed on the IDX. In this study, the regression model used is as follows:

$$\mathbf{Ri = \alpha + \beta pINF + \beta pER + \beta pIR + \beta pMS + e}$$

Explanation of formula:

Ri = Stock Return (Dependent Variable)

a = Constant

β = Regression Coefficient

pINF = Inflation Rate (Independent Variable)

pER = Exchange Rate (Independent Variable)

pIR = Interest Rate (Independent Variable)

pMS = Money Supply (Independent Variable)

e = *Standard Error*

J. Hypothesis Testing

a. Statistical T-Test

Statistical T-test could be utilized to describe how far the explanatory of independent variables individually explain the variation of dependent variable (Ghozali, 2011). The decision whether to accept or reject the hypotheses is as follows:

- If the p-value > α then the H0 is accepted while the Ha rejected. It means that independent variable partially has no significant effect toward the dependent variable.
- If the p-value < α then the H0 rejected while the Ha accepted. It means that independent variable partially has significant effect toward the dependent variable.

b. Statistical F-Test

Statistical F-Test aims to test whether the variables are independent included in the model have an impact on dependent variable simultaneously (Ghozali, 2011). This study used a significance level of 0.05 (a = 5%) and compared F count with F table. The decision whetherto accept or reject the hypotheses is as follows:

- If the significance level is greater than 5% then it can be concludedthat Ho is accepted, otherwise Ha is rejected.
- If the significance level is less than 5% then it can be concluded thatHo is rejected, otherwise Ha is accepted.

c. Determination Coefficient Test (R^2)

This test aim to find the goodness-fit of the regression model in which to measure the value of R Square to indicate the proportion of the dependent variable described by the independent variables (Ghozali, 2011).

V. CONCLUSION AND RECCOMENDATIONS

A. Conclusion

Based on the result of regression and data analysis, the following conclusions can be drawn:

1. The first hypothesis (H1) stated that inflation has negative and significant impact on stock return and this hypothesis is not supported by these research findings. The inflation has no impact on stock return as long as the inflation rate is low and stable. Investors believe that companies have particular strategies dealing withinflation in the country by internal efforts, for instance, reducing unnecessary costs from the company.
2. The second hypothesis stated that exchange rate has significant and negative impact on stock return and this second hypothesis is supported by these research findings. The increase in US Dollar currency means that the Rupiah currency decreases against US Dollar currency. Investors tend to invest in the money market when exchange rate increases which more profitable rather than investing on the stock market using Rupiah currency. Therefore, the increasein US Dollar impact on the decrease of the company stock return.
3. The third hypothesis stated that interest rate has significant and negative impact on stock return and this hypothesis is supported by these research findings. When the saving interest rate in the bank decreases, the investor tends to change their investments by investing in the stocks market that more profitable than saving deposits. Therefore, the interest rate has negative impacton stock return.
4. Lastly, the fourth hypothesis which stated that money supply has significant and negative impact on stock return is supported by these research findings. The increase in money supply will increase the public expenditure in real output, therefore the demand of stock return in the capital market is decrease. Furthermore, the increase in money supply will increase the inflationwhich

affecting the increase of input production cost then will lead to the decrease of company's profit. When the company's profit is decreasing, the stock return of company stock will also decrease. Thus, it can be concluded that money supply has negative impact on stock return of restaurant, hotel, andtourism sub-sector in Indonesia.

B. Recommendations

According to the conclusion, the author would provide some suggestions to related parties, such as:

1. Investor

   The results show that some of the chosen macroeconomic variables (Interest Rate, Exchange Rate, and Money Supply) have impact on the stock return. This means the investors should be considering the macroeconomic situation in taking investments decisions to invest in capital market especially on restaurant, hotel, and tourism sub-sector.

2. Academician

   For future studies, the researcher should consider to add other macroeconomic variables to strengthen the research data such as gold price and gross domestic product due to the low value of adjusted R-square (R^2) in this research. Additionally, the researcher could also change the period of time to find various results using the same topic.

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