UNIVERSITI TEKNOLOGI MARA

THE INFLUENCE OF MACROECONOMICS TOWARDS THE NUMBER OF IPOS IN THE MALAYSIAN STOCK MARKET

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Final Year Project submitted in fulfilment of
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AUTHOR'S DECLARATION

I declare that the work in this final year project paper was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Undergraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

This research is aiming to determine the amount of influence does various macroeconomic variables could influence the amount of companies going public and through IPO in Bursa Malaysia each year, analysing data from 1980 to 2020. The research was performed by taking data produced by Bursa Malaysia as well as other secondary data which are the Gross Domestic Product (GDP), Interest Rate (IR), Stock Market Performance (KLCI), and Inflation Rate (IFR). The data will be run through and analysed using multiple tests such as descriptive statistics, correlation, multiple regression tests, and more. The researcher may conclude from this research that there are correlation between the macroeconomic variables and the number of companies going public in Malaysia.

Table of Contents

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This research is undertaken to investigate the influence of macroeconomics towards the number of IPOs in the Malaysian stock market. This chapter will briefly discuss the background of study, problem statement of the study, research objective, significance of study, study scope, and summary in chapter one. Entirely, this research contains five chapters. Chapter 1 discusses the introduction of the research, Chapter 2 discusses the literature reviews from previous journal and studies on the influence of macroeconomics towards the in number of IPOs in the Malaysian stock market, and Chapter 3 discusses the research methodology. On the other hand, Chapter 4 will explain the findings and results of the research. Finally, Chapter 5 describes the conclusion and recommendation of the research.

1.2 Research Background

Companies go public in order to have access to pools of investor cash to fuel their expansion. Existing shareholders can sell their shares at a profit using this method. Initial public offerings (IPOs) have been extensively studied in the financial literature, and it is generally known that they display three forms of anomalous behavior: initial underpricing, clustering, and long-term underperformance. (RITTER, 1991). Studies have indicated that macroeconomic conditions influence IPOs, based on research undertaken by Chen, Roll, and Ross (1986) on the relationship between macroeconomic factors and stock returns. (Chen et al., 1986). Macroeconomic variables, according to research, are great candidates for analysing the factors that determine the number of IPOs since they affect the cash flow of numerous enterprises at the same time and influence risk-adjusted discount rates. Despite disagreements about the factors' reliability and consistency in predicting future stock returns, it has been suggested that the magnitude of the time-varying response of stock prices to expected (or unexpected) changes in macroeconomic policies has economic implications for market participants. (Tran & Jeon, 2011). According to a researchers thought process, devoted to the idea that companies going through the IPO process will convert their private equities into securities and issue them for the first time to sell on the open market (Brau, 2012).

Macroeconomic variables such as interest rates, from a theoretical standpoint, provide useful information to stock market investors.(Chen et al., 1986). The central bank of a

developing market uses monetary policy to affect private capital flows and asset price bubbles. The central bank intervenes to keep the stock market from 'heating up' by lowering inflation. Increased inflation concerns institutional investors and fund managers seeking the highest risk-adjusted returns, as it raises the chance of high interest rates. Market players expect to be rewarded for taking risks because they are concerned about future monetary policy. The "hurdle rate," which managers use to evaluate prospective assets, rises as the risk premium rises. (Ameer, 2012).

The Malaysian stock exchange is operated by Bursa Malaysia Berhad. Bursa Malaysia's mission is to oversee and run a fully integrated exchange, as well as provide exchange-related services such as settlement, clearing, depository services, and trading (Bursa Malaysia, 2020). It is listed on the Kuala Lumpur Stock Exchange (KLSE), which includes the 30 top corporations from various industries and serves as an economic barometer for Malaysia. The Main Market or ACE market, which comprises of thirteen sectors from various corporations, is one of two types of markets in which companies can be listed in Bursa Malaysia. This paper has two primary objectives: (1) to gauge the influence of interest rate, KLCI, Growth Domestic Product, and Inflation rate on the number of IPOs and (2) to determine what causes "hot" and "cold" IPO regimes. While many macroeconomic variables could be examined,3 this paper focuses on only four variables: interest rate, inflation rate, growth domestic product rate, and Stock market index. These macroeconomic variables have sufficient support in the finance literature (see Fama & French, 1989; Jensen, Mercer, & Johnson, 1996; Avramov & Chordia, 2006; Tran & Jeon, 2011)

1.3 Problem Statement

For decades, a lot of factors have influenced the performance of Bursa Malaysia. For the sake of example, continued foreign fund outflows. This has been the case especially since the 1Malaysia Development Bhd controversy which was worsened by the domestic political uncertainties. There is also a significant drop in the number of IPOs listed on the Main and Ace markets over the past decade. According to G. Kana, Prior to the COVID-19 pandemic, the amount of companies listed in IPO in 2019 was almost half the amount in 2010. With the decrease in amount of IPOs in the stock market, there will be less companies seeking an increase of capital and funds which can result in a less competitive market. According to Previous studies on the relationship between macroeconomics and IPOs are positive when in comparison with the industrial production of the country. This research will take data from between 1980 and 2020, data has been collected for this study across a 30 year period because

it will have a clearer result whether the independent variables have a more significant influence on the number of IPOs yearly. Studies from multiple sources argue that macroeconomic variables are excellent candidates for examining such factors that directly or indirectly influence the amount of IPOs due to the macroeconomic changes simultaneously affect the cash flow of many firms and influences risk-adjusted discount rates (Tran & Jeon, 2011; Chen, 2009, 2007; Jovanovic & Rousseau, 2004; Campbell, Lettau, Malkiel, & Xu, 2001). This research will take data from between 1980 and 2020, data has been collected for this study across a 30 year period.

This research can determine the whether the performance of a country's economy can be used as a base measurement for the variety of IPOs in Bursa Malaysia. Using the past two decades as the duration, the study can research the conditions of the economy coming into the 21st century, predicting the accessibility of the IPO as well as continuing previous studies using different independent variables. Referring to listing statistics provided by Bursa Malaysia, it shows the number of public listed companies that was listed in the main market has an inconsistency with the number of companies getting listed increasing and decreasing with different years, and this research will show the correlation between macroeconomic factors and the numbers of IPOs listed yearly. Issuer companies participate in the IPO process to raise capital. They can either go public directly by selling securities to the public or indirectly through the use of an underwriter. Underwriters often serve as representatives for issuers, preparing required and essential material for investors. Because there is less information regarding private companies, investors evaluate the offered equity by looking at the underwriters' prior performance (Jelic et al., 2001). This paper contributes to the literature in two ways. For starters, it broadens macroeconomic research to include primary equities market operations in an emerging market environment. This report covers a longer period of time and has a larger number of IPOs than previous Malaysian IPO studies (see Jelic et al., 2001; Ameer, 2012; Mehmood et al., 2021;)

In conclusion, investigations whether macroeconomics will affect the IPO listing each year has become an important factor to research on to recognize the activities must done to improve the rate of companies going public. The problem that arises is to know how significant the macroeconomics of a country (Malaysia) is towards the arrival of companies going public, which this study helps analyze the correlation between the multiple variables.

1.4 Research Questions

   1.4.1 What is the relationship between Growth Domestic Product (GDP) and the number of IPOs in Malaysia?

   1.4.2 What is the relationship between interest rates and the number of IPOs in Malaysia?

   1.4.3 What is the relationship between the Stock market performance (KLCI) and number of IPOs in Malaysia?

   1.4.4 What is the relationship between the inflation rate and the number of IPOs in Malaysia?

1.5 Research Objectives

   1.5.1 To determine the relationship of GDP and the number of companies listed as IPO

   1.5.2 To determine the relationship of interest rates and the number of companies listed as IPO

   1.5.3 To determine the relationship of KLCI and the number of companies listed as IPO

   1.5.4 To determine the relationship of inflation rate and the number of companies listed as IPO

1.6 Significance of Study

   This study/research could benefit all students who are pursuing their education and need to complete a thesis in order to graduate. Simultaneously, it will assist those students in comprehending the influence of any changes in microeconomic variables on the number of companies going public in Malaysian stock market if and when it relates to their education. As a result, this study will provide proof that macroeconomic variables have a major impact on the success of Malaysia's stock market.

   This research could assist investors in gaining a better understanding of the influence of macroeconomic factors on the number of companies going public and being listed on IPO ins Malaysia. It also gives up-to-date information on the IPO statistics which introduces new companies to invest in. This study assists examining the link between various macroeconomic

variables and the number of IPOs listed in Bursa Malaysia, as well as identifying which variables have a significant impact with the IPOs. Similarly, investors' capacities will be strengthened, which aids in a more diverse portfolio as more companies go public listings by understanding the implication of macroeconomic variables towards the availability of IPOs.

Furthermore, this finding could serve as a starting point for future research. It will aid future academics in comprehending the influence of the macroeconomic parameters chosen on the number of companies listed on Bursa Malaysia. This study could also be used as a source of information for policymakers. Policymakers may utilise this information on the impact of macroeconomic conditions on the stock market to design new policies or modify existing ones in the future.

1.7 Scope of Study

The major purpose of this research is to investigate the relationship between macroeconomic variables and the number of companies that are listed on the Malaysian stock exchange, Bursa Malaysia. The number of IPOs in the stock market fluctuates as a dependent variable in this study, while the independent factors are gross domestic product, interest rate, stock market performance, and inflation. For this study, secondary data sources such as Eikon DataStream and Bursa Malaysia will be used. The IPO listing statistics are the observation samples. E-views was used to analyse the data. From 1980 through 2020, the researcher collected panel data on an annual basis.

1.8 Limitations of the study

1.8.1 Data Availability

For this study, secondary data was used, such as the listing of companies that have went through the process of Initial Public Offering which are listed on Bursa Malaysia annually. As a result, the researcher has difficulty gathering data because of the separation between the main market and ACE market. In addition to that, the transition from having three separate markets to two and back to three proves to be difficult to obtain data. This constraint makes it difficult for the researcher to precisely calculate the data.

1.8.2 Lack of Past Research

The majority of previous study was conducted in other nations. Although some study has been conducted in Malaysia, none has been conducted in the same topic, namely the macroeconomic affects towards listing companies. In order to broaden the knowledge, this

research necessitates a large number of journals on macroeconomics and its influence. Finally, the researcher must compile and synthesise all of the data in order to have a deeper grasp of the subject.

1.8.3 Time Constraints

A time frame that is highly essential to researchers is a duration limitation. It is necessary to comprehend in order to put research findings into context and assess the study investigation's relevance. It may take a long time to collect all of the data at once. As a result, just a few data points will be included in this inquiry.

1.9 Definitions of Key Terms

1.9.1 IPO

The process of issuing shares of a private firm to the public in a fresh stock issuance is known as an initial public offering (IPO). An initial public offering (IPO) allows a firm to raise funds from the general public. The move from a private to a public firm, which often involves a share premium for current private investors, can be a crucial opportunity for private investors to completely realise rewards from their investment. Meanwhile, public investors are allowed to participate in the offering.

1.9.2 Growth Domestic Product

The total monetary or market worth of all finished goods and services produced inside a country's borders in a certain time period is known as GDP. It serves as a comprehensive scorecard of a country's economic health because it is a wide measure of entire domestic production. All private and public consumption, government outlays, investments, additions to private inventories, paid-in building expenses, and the foreign balance of trade are all factored into a country's GDP calculation.

1.9.3 Interest Rate

The interest rate is a percentage of the principal, the amount borrowed, that a lender charges a borrower. The annual percentage rate (APR) is the term used to describe the interest rate on a loan (APR). An interest rate can also be applied to money earned via a savings account or a certificate of deposit at a bank or credit union (CD). The income generated on these deposit accounts is referred to as the annual percentage yield (APY).

1.9.4 Stock Market Performance

A stock market index is a statistical metric that shows how the stock market is changing. A few similar types of equities are picked from among the securities currently listed on the

exchange and grouped together to construct an index. The type of industry, market capitalization, or company size could all be factors in stock selection. The underlying stocks' values are used to calculate the stock market index's value. Any change in the underlying stock values has an impact on the index's overall worth. The index will rise if the prices of most of the underlying securities rise, and vice versa. The stock market index functions as a barometer, indicating the market's overall state. They make it easier for investors to recognise the market's overall pattern. Investors use the stock market as a guide when deciding which stocks to invest in.

1.9.5 Inflation Rate

Inflation is the gradual loss of a currency's buying value over time. The increase in the average price level of a basket of selected goods and services in an economy over time can be used to calculate a quantitative estimate of the rate at which buying power declines. A rise in the general level of prices, which is frequently stated as a percentage, signifies that a unit of currency now buys less than it did previously. The inflation rate is the percentage change in a particular period's price index relative to a prior period's price index. It's commonly measured annually or on a year-to-year basis.

1.10 Summary

In summary, chapter one provides an introduction to the influence of Macroeconomics towards the number of IPOs in the Malaysian stock market. Using such independent variables as Gross Domestic Product, interest rate, Stock Market Index, and inflation rate against the number of IPOs. The amount of IPOs each year for the study will be used as the performance indicator. In addition, the researcher highlights the research background on how all these independent variable impact the number of companies listed that year. Otherwise, moving on to the problem statement, research question, and research goals. The study's scope and limitations are described. To make it easier to refer, definitions of the terms are also provided. As a result, the researcher can determine whether any of the macroeconomics will hypothetically influence the IPOs. This will be addressed in the following chapter. Overall, all the data and information presented in this research will help to answer the research questions and objectives in this chapter one.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A literature review is a step-by-step method that requires identifying published and unpublished work on the topic of interest from secondary data sources. A clearer explanation of IPO, Gross Domestic Product, Interest Rate, KLCI, and Inflation rate is given in this chapter. Researchers is assisted by the chosen articles and journals in completing this research paper.

2.2 Literature Review on IPO

The term "IPO" refers to a company's first public offering and sale of stock to the general public. The revenues are raised by selling the company's common shares to the general public. The term 'IPO' is proxied in the current study by the number of IPOs issued each year, total IPO profits raised per year, and average IPO Proceeds raised per year, all of which are dependent variables (Laohakosol et al., 2018). The number of initial public offerings (IPOs) issued by companies in a given year is known as the number of IPOs. The number of IPOs refers to the number of IPOs that are issued each year in the capital market (Ameer, 2012). When a company goes public through an IPO, it obtains two major benefits. To begin with, the firm's liquidity improves, as does its ability to pay down some present creditors. Second, more cash allows the company to make more fresh investments and grow faster (Berk and DeMarzo, 2013).

All businesses must consider the costs and benefits of participating in public activities, as well as the alternatives (Brau & Fawcett 2006). There are four motivations for going public, according to investing theories: generating capital, providing a cash-out opportunity for private shareholders, financing strategic initiatives, and lowering the cost of capital (Brau & Fawcett 2006). IPO makes a way to change the capital structure, increasing the stakeholders' financial credibility, which is how firms lessen their cost of debt. Brau and Fawcett (2006) said that the most important reason for the management of any company in the USA was to make the public market use the IPO proceeds to acquire other firms. According to Brau and Fawcett (2006), the most significant motive for any company's management in the United States is to have the public market use the IPO profits to acquire other companies. The 'Window of Opportunity Theory' proposes that a company's owner decides to issue fresh stocks in the primary market

in response to market conditions, taking into account the lesser number of equity issuance and lower stock prices in the market, and vice versa was established by Loughran, Ritter, and Rydqvist (1994). Moreover, Jelic, Saadouni, and Briston (2001) have found that there is a scarcity of research on the impact of management profit predictions on initial public offering (IPO) outcomes. The necessity in Malaysia for initial public offerings (IPOs) to include management profit estimates in their prospectuses provides a unique test case for the ongoing debate over the use of forecasts in IPO market pricing.

Macroeconomic indicators, the state of the capital market, the current stage of the economic cycle, the site and timing of the IPO, as well as internal indicators of the issuing company and a variety of other factors, can all have a significant impact on the IPO's effectiveness and the country's macroeconomic security (Of et al., 2019). Yung, Colak and Wang (2008) argue that adverse selection theory can be the key to understanding IPO clustering as well, claiming that when the economy is doing well, more companies will go public in order to take advantage of fresh investment opportunities.

2.3 Literature Review on GDP

In recent years, the relationship between stock market growth and GDP has piqued the curiosity of many practitioners and academics. Many academics and investors are interested in finding indicators that can help anticipate stock prices, while policymakers are looking for any signal that can effect economic growth. It is vital to do study into this topic in order to identify whether investors can utilise or rely on the release of macroeconomic data to predict market direction, or whether policymakers can use stock market growth to forecast economic growth.

Because the GDP exposes market circumstances, it is the most important capital structure determinant of country-level performance in all previous research (Shabbir et al., 2020; Pradhan et al., 2020; Camara, 2012). According to (Raheem et al., 2020), The pace of GDP growth is the lifeblood of any country's economy. Any country's economy would be stronger if its GDP was higher. The degree of future business activity is represented by GDP, which corresponds to the economy's business cycle movements. Increased output and expansion in the economy are the effects of higher GDP growth (Ameer, 2012).

They discovered that the rate of GDP growth had an impact on the number of companies that had initial public offerings. According to studies on macroeconomic consequences, the growth of industrial production sometimes promotes the decision to take a company public through an initial public offering (IPO) in order to raise fresh capital (Flannery &

Protopapadakis, 2002). Finally, according to Brzeszczynski (2009), "the IPO variability in emerging markets, as well as the profitability of public offerings, are tied to macroeconomic conditions, business cycles, and stock market activity." Current stock levels are usually assumed to be positively connected to future levels of actual activity, as measured by GDP or industrial production. Returns are a function of future cash flow streams, which are heavily contingent on future economic conditions, therefore this finding appears obvious. (Bilson et al., 2001)

2.4 Literature Review on Interest Rate

Ameer (2012) found that the empirical findings reveal a substantial link between local macroeconomic indicators and the frequency of initial public offerings. The number of IPOs is significantly influenced by interest rates and industrial production. We show that interest rate fluctuations have a 10% chance of swinging from a "hot" to a "cold" IPO market regime (and vice versa) using the Markov regime flipping regression model. A hot IPO market lasted only 10 months on average, whereas a cold IPO market lasted only 9 months. According to these data, if the interest rate rises by one standard deviation, there is a 10% risk that IPOs in Malaysia will slow down, and that this downward trend will last for about nine months. These findings suggest that monetary policy in Malaysia influences IPOs to a substantial extent.

According to certain studies, interest rates have an impact on the frequency of IPOs and the overall amount raised through equity offerings (see: Chang, 2009; Ameer, 2007; Neumeyer & Perri, 2005; Uribe & Yue, 2006; Jovanovic & Rousseau, 2004; Brau, Francis, & Kohers, 2003). There is a dynamic interplay between interest rate, finance, and investment in neoclassical economic theory; interest rate causes a "credit multiplier" effect and a monetary policy transmission shock. According to Brau et al. (2003), interest rate influences the choice of IPO for new company takeovers because when interest rates are low, acquiring corporations can utilise more debt to finance the acquisition of the target, resulting in fewer IPOs and more takeover activity. According to Jovanovic and Rousseau (2004), the relationship between the volume of an IPO and the interest rate is non-monotonic. IPOs are discouraged at extremely high interest rates because future income is discounted more heavily, whereas there are benefits to waiting until interest rates climb to more favourable levels at very low interest rates. According to Chang (2009), interest rates are a tool for enacting tight or loose monetary policy, which has an impact on the stock market via credit channels (see, e.g., Bernanke & Gertler, 2001). In Malaysia's emerging market, Ameer (2012) found a substantial negative association between the interest rate and the number of IPOs, as well as a large positive relationship

between industrial production and the number of IPOs. On the other hand, the reference interest rate is the only macroeconomic factor that has been shown to explain IPO numbers (Kovandová & Zinecker, 2015).

2.5 Literature Review on Inflation Rate

Central bankers are charged with the macroeconomic goal of maintaining a stable country's inflation rate, hence inflation is one of the important macroeconomic indicators regularly monitored by the monetary authorities (Salisu et al., 2018). Many research have been undertaken on the degrees and drivers of inflation persistence, but the effect of international commodity prices such as gold has received less attention. Meanwhile, data from recent research such as Aye et al. (2017), Lucey et al. (2017), and Salisu et al. (2019) suggests that the relationship between inflation rate and gold price is crucial, which the monetary authority and portfolio investors should investigate.

In the current study, the inflation rate is used as a proxy for inflation. In their analysis, Bilson, Brailsford, and Hooper (2002) employed the inflation rate as a proxy for inflation. Greater inflation refers to investors' expectations of a higher rate of return on new investments, implying that the cost of doing business is rising, discouraging companies from conducting initial public offerings.

During periods of strong inflation, high rates of return are expected. Similarly, due to the increased stringent requirements of funds, a high-risk premium tends to hinder the development of fresh future investments (Ameer, 2012). According to a study, inflation and IPO unpredictability have a positive relationship, according to Tran and Jeon (see (Tran & Jeon, 2011). On the other hand, Laohakosol found that there were negative relations between inflation rate and the number of IPO (Laohakosol et al., 2018). After a shock, it can alternatively be defined as the time it takes for inflation to return to its equilibrium level (long-term mean) (Bilici and ekin, 2020).

According to (Oloko et al., 2021), a number of research have been carried out in order to better understand the dynamics of inflation rate persistence in a country or set of countries. Meanwhile, other research suggests that the dynamics of inflation rate persistence are influenced by the economy's inflation rate. In addition to that, equity reflects a contingent claim on the firm's economic assets, common stock has always been seen as a safeguard against inflation (Bilson et al., 2001).
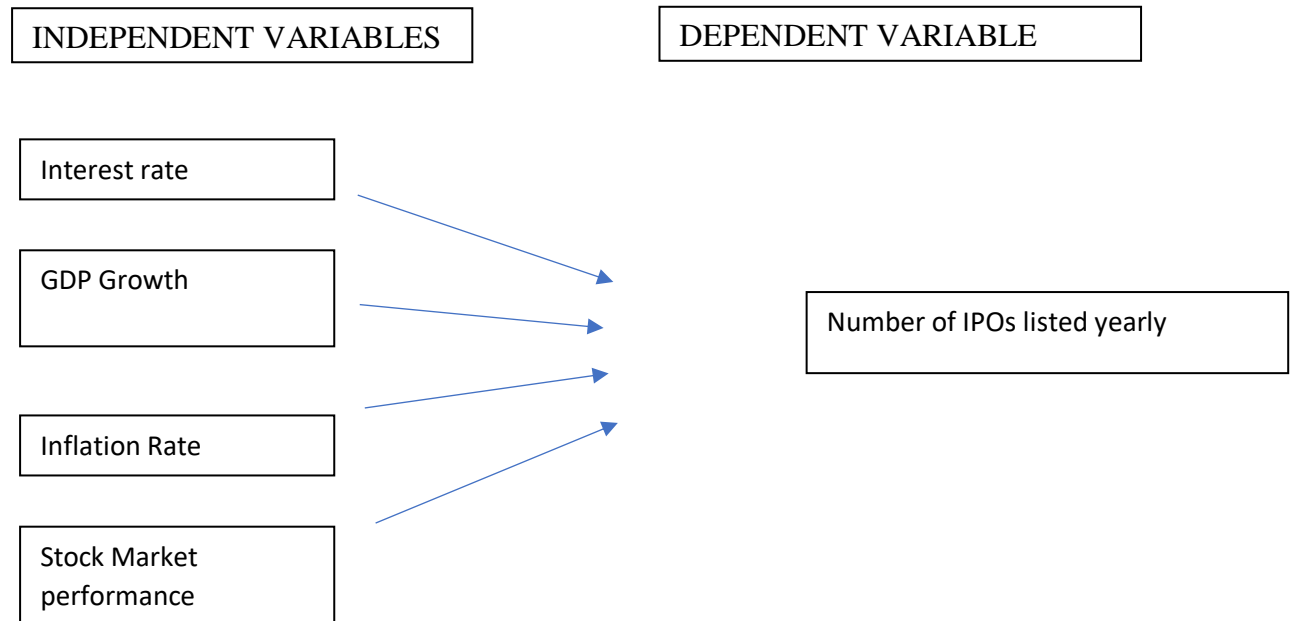
2.6 Literature Review on Stock Market Performance

The stock market is an important part of a country's economic system and one of the most important measures of economic health (Ismail et al., 2020). The Kuala Lumpur Composite Index (KLCI) was upgraded as part of Bursa Malaysia's strategic initiative to guarantee that it remains resilient in assessing the national economy as its tie to the global economy grows. The KLCI has been merged with internationally recognised index computation technique by Bursa Malaysia and FTSE, its index partner, to produce a more investable, tradable, and transparently managed index. The FTSE Bursa Malaysia KLCI, also known as the FBM KLCI, is a capitalization-weighted stock market index that includes the 30 largest businesses on the Bursa Malaysia by market capitalization that meet the FTSE Bursa Malaysia Index Ground Rules' eligibility conditions. FTSE and Bursa Malaysia jointly manage the index. According to Azevedo and more, see (Azevedo et al., 2014), The Malaysian stock market is one of the leading Asian emerging markets, with significant growth over the last decade, and the KLCI is now widely recognised as one of the best references for Asia-Pacific equity markets, with most analysts using it to comment on Malaysian and other important Asian economies' economic prospects.

The KLSE (also known as Bursa Malaysia) is a Malaysian stock exchange that is one of the largest in Southeast Asia in terms of market capitalisation (Ismail et al., 2020). To provide a more investable, tradable, and openly managed index, the FTSE Bursa Malaysia KLCI will use an internationally acknowledged index computation process. The improved KLCI will serve as a platform for a greater range of enticing and investable prospects. Only the investable fraction of the constituents will be included in the index calculation, which will be free float adjusted. (Perrett et al., 2009). Insights into IPO underpricing and post-IPO performance in less developed stock markets are provided by the unique in-person plus online two-stage roadshow procedure and the significant role played by retail investors in the secondary market in China (Bian et al., 2021). The Malaysian environment is particularly intriguing since it has a number of unique characteristics that may influence managerial incentives to control profitability in the context of an IPO. (Ahmad-Zaluki et al., 2011)

2.7 Theoretical Framework

A research framework is a logically developed, defined, and explained network of links among variables that are important to the research topic. To show the relationship between the independent and dependent variables. The diagram looks like this:

INDEPENDENT VARIABLES	DEPENDENT VARIABLE

Interest rate	
GDP Growth	Number of IPOs listed yearly
Inflation Rate	
Stock Market performance	

Theoretical Framework for the study (Laohakosol et al., 2018)

2.8 Summary

In chapter two, go through all of the variables from previous studies on the same topic, as well as the dependent and independent variables chosen for this study. This review serves as a reference and source of support of this study. However, the study's results will change for each variable owing to difference in methodology, geography, and data used. As a result, no conclusion can be drawn from all of the elements considered. Thus, this research will look at how changes in macroeconomic variables affect the number of IPOs each year in Bursa Malaysia.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

In the following chapter, it is regarding data collection, analysis, and design. An inquiry was conducted to determine why a test was performed, how it was performed, and how the results were interpreted. The type and sources of data used, as well as the sample size or population of data, are all revealed during data compilation. The ability to use data is determined by how it is processed. Secondary data will be gathered from a variety of sources, including World Bank Data, DataStream, and some internet research. From 1980 to 2020, each data set covered a thirty (30) year period. Furthermore, the reason for using DataStream, which is the most accurate data source available, in order to obtain any necessary data for this report.

This chapter will go over the procedures used in this analysis, such as sampling, research design, data collection, variables, hypothesis statement, and analytic approach. This chapter will go through how to obtain information and where to look for it. Furthermore, a great lot of information on the sets of variables used in this, which are dependent and independent variables, will be provided. This chapter also covers the analysis design, hypothesis statement, and analysis technique.

3.2 Sampling

The population and sample comprise of the number of companies that have been listed on Bursa Malaysia. Bursa Malaysia has a list of companies to pick from,. Between 1980 and 2020, data has been collected for this study across a 30 year period as it will have a clearer result whether the independent variables have a more significant influence on the number of IPOs yearly. This study employs a panel data regression model that incorporates all cross-section and time data.

3.3 Data Collection

Data collection entails acquiring data and information from primary or secondary sources. Primary data are those that the researcher can see first-hand, whereas secondary data are those that have already been documented and may be retrieved. The data can also be utilised to assess the outcomes of the study questions. A consistent collection of data is required to assure the consistency and legitimacy of the data obtained. This study only used data that are listed on the IPO listing statistic page which is hosted on the Bursa Malaysia's website. While the factors are taken from Data Streams. The period covered in this analysis is from 1980 to 2020 yearly.

3.3.1 Secondary Data

Secondary data consists of statistical items generated from the information of others. Secondary data aided the researcher in comprehending the challenges, devising a research strategy, and analysing the results. Journals, newspapers, articles, newspapers, websites, and a range of other sources are frequently used. Using secondary data from the same sources has the advantage of allowing quality data from many sources to be compared, such as saving time. The secondary data sample in this study comprises of analysing each of the independent variable on a yearly basis from 1980 to 2020.

3.3.2 Journals and Articles

A collection of several articles in the fields of business, finance, and economics were primarily used to obtain study data. The collected articles will be used as a guide for doing a literature review and as a reference for evaluating a previous approach to linked research analysis. Several journals, including the UiTM website, the e-online library, and Google Scholar, were also obtained via the internet.

3.3.3 World Bank Data

The World Bank is a multilateral financial institution with statistics and data that are key components of information, and they are easily accessible to all users over the internet, according to the definition of open data. The World Bank provides free and open access to a large collection of data on development in nations around the world, as well as other datasets listed in the data catalogue. In order to study the relationship between macroeconomic variables and the number of IPOs listed yearly, the independent data has to be taken from the World Bank Data. As the information and data from the World Bank Data covers the independent variables consisting of GDP growth, interest rate, and inflation rate.

3.3.4 Eikon DataStream

This research uses the program Thomson Eikon DataStream to locate any relevant data to be used in research in order to capitalize on the opportunity given by UiTM, as they provide a subscribed account to the Eikon DataStream. Eikon is a financial markets website that provides data for macroeconomic analysis, asset allocation, and sector analysis to users. Eikon is built on DataStream, one of the most comprehensive economic databases, which includes company and cross-asset market data. It's also a framework that gives users access to a wide range of financial data in a workspace that's personalised to their needs and workflow. It's a

global financial and macroeconomic knowledge hub including data on stocks, currencies, and other issues for 175 countries and 60 markets, including Malaysia.

3.4 Variables

Something that gives or changes its value is referred to as a variable. At different times, the same thing or person might have distinct values. It is made up both dependent and independent variables. As a result, the goal is to look at the relationship between macroeconomic variables and number of IPOs listed yearly on Bursa Malaysia.

3.4.1 Dependent Variable

The dependent variable is acting as the primary variable for the researcher to assess the impact and influence from the independent factors. The dependent variable used in this research is the amount of companies going public in Bursa Malaysia to support the independent factors in the investigation of their connection.

3.4.2 Independent Variables

The controlled variables are those that are utilised to see how the dependent variable affects the outcome. Changes in the independent variable will cause the dependent variable to change. The term "independent variable" refers to a variable that is unaffected by other variables. It has the potential to have a positive or negative impact on the dependent variable. All of the variables are intertwined and can influence one another's outcomes. The GDP, Interest Rate, Inflation Rate, and Stock Market performance are the independent variables for this study.

3.5 Research Design

The research design is a set of judgments that include fair and realistic subjects related to research aims and a variety of research components. The research goal, research types, research interference, research location, unit of analysis, and, lastly, the research time horizon are all included in this section.

3.5.1 Purpose of the Study

The purpose of this research is to investigate the relationship between macroeconomic variables and how it influences the number of companies listed in IPO yearly.

3.5.2 Types of Investigation

This research paper is using the correlational study as it focused on the relationship of macroeconomic variables with the listing statistics of Bursa Malaysia.

3.5.3 Research Interference

Research interference is defined as the frequency with which a researcher interferes with normal workflow. This study was carried out in a natural setting with minimal intervention from the researcher. To obtain the analysis, the researcher must collect data from the DataStream and from Bursa Malaysia. The correlation investigation method was used in this study since it reflects on the influence of macroeconomic variables with the number of IPOs listed yearly on Bursa Malaysia.

3.5.4 Study Setting

The research is based on secondary data acquired from prior Bursa Malaysia statistics and DataStreams. This research is being conducted in a non-contrived setting, with all analyses being conducted as they would be in a natural setting.

3.5.5 Unit of Analysis

The unit analysis refers to the level of data combination that will be used in the data analysis stage and is dependent on the issues identified in the research question. Because this research only uses statistics from the Malaysian stock market, in this study, a geographical unit within a Malaysian state was chosen as the evaluation unit.

3.5.6 Time Horizon

Cross sectional and longitudinal studies are used to separate the study's temporal span. A cross-sectional study is one in which data is collected once, perhaps across several days, weeks, or months, to meet the research's purpose. Longitudinal studies, on the other hand, are studies that take place over a longer period of time with the purpose of achieving a specified outcome. This research will rely on longitudinal studies. The research took place over a thirty-year period, starting in 1980 and concluding in 2020.

3.6 Hypothesis Statement

In hypotheses statement research, there are a few critical tasks to identify, such as facts that are important or not, in order to determine which research design is appropriate and to provide a structure for organising data. A research hypothesis is a relationship between dependent and independent variables that can be accepted or rejected. There are two kinds of hypotheses statements: alternative hypotheses (H_A) and null hypotheses (H_O).

A) Null Hypothesis (HO)

The null hypothesis is a statement of the values that the researcher did not expect. That implies there is no significant relationship between dependent and independent variables.

B) Alternative Hypothesis (HA)

Alternative hypothesis typically is a statement of the values that the researcher expects. That implies that there is a significant relationship between dependent and independent variables.

3.6.1 Growth Domestic Product (GDP)

(H_O): There is no significant relationship between GDP and Number of IPOs listed.

(H_A): There is a significant relationship between GDP and Number of IPOs listed.

3.6.2 Interest Rate

(H_O): There is no significant relationship between Interest Rate and Number of IPOs listed.

(H_A): There is a significant relationship between Interest Rate and Number of IPOs listed.

3.6.3 Stock Market Performance (KLCI)

(H_O): There is no significant relationship between KLCI and Number of IPOs listed.

(H_A): There is a significant relationship between KLCI and Number of IPOs listed.

3.6.4 Inflation Rate

(H_O): There is no significant relationship between Inflation Rate and Number of IPOs listed.

(H_A): There is a significant relationship between Inflation Rate and Number of IPOs listed.

3.7 Research Methodology

Secondary data from the World Bank, DataStream, and Bursa Malaysia was used in this study. The purpose of this study was to study the relationship between the dependent variable, number of IPOs listed yearly, and the independent variables, Gross Domestic Product (GDP), Interest Rate (INR), Stock Market Performance (KLCI), and Inflation Rate (INF). All four elements have the potential to influence the number of companies going public each year in Malaysia and the time-series data is from 1980 to 2020.

3.7.1 Correlation Analysis

The goal of correlation is to determine if the dependent and independent variables are related linearly. It's a way for measuring how strong the correlations between two variables are. The t-p-value statistic indicates whether the null hypothesis should be accepted or rejected. If the p value is less than 5% of significance, the null hypothesis can be rejected. The two variables are closely related, according to this statement.

H_0: There is no correlation

H_A: There is a correlation

3.7.2 Descriptive Analysis

The main component of the data in the research is defined by descriptive analysis. The data will be organised, summarised, and presented in the analysis. As a result, it helps with quantitative data management. It also makes it easier to organise enormous amounts of data into a logical statistical manner. The value distribution's centre is estimated using the central tendency of the distribution. The mean, median, and mode are the three basic indicators of the distribution's central tendency.

Mean is the first. It's the average number, and it's probably the most common means of expressing the central tendency. To find the mean, add all of the numbers together and divide by the number of numbers. Meanwhile, in a set of data that must be organised in ascending or descending order, the median is the most essential variable. In the value set, the mode, on the other hand, is the most common value. The minimum, maximum, variance, and standard deviation are all displayed at the end. All other numbers in the data collection are equal to or lower than the data's minimum value. It is the data set's smallest value. The maximum data value is the highest value in the data set that is equal to or greater than all other values. In a nutshell, it means that gathering data is the most valuable activity. The variance is equal to the square root of the standard deviation square. Finally, the standard deviation depicts the set's relationship with the mean.

3.7.3 Coefficient of Determination

The ratio of the explained sum of squares to the total sum of squares is referred to as the coefficient of determination, often known as R-squared. The closer the computed regression equation fits the sample data, the greater the R-squared. "Goodness of fit" is the term for this

metric. When R-squared equals 1, it is the ideal match. For example, if the R-squares is equal to 0.5, the model's input may explain nearly half of the observed variation.

3.7.4 Multicollinearity

The multicollinearity test determines if the dependent variable can be estimated in multiple regression models with a given degree of significance by other variables. On the other hand, this test demonstrates that movement in other independent variables completely explains variance in one independent variable.

3.7.5 Tobit Regression Model

The Tobit model, also known as a censored regression model, is used to estimate linear correlations between variables when the dependent variable has either left- or right-censoring (also known as censoring from below and above, respectively). Censoring from above occurs when all cases with a value at or over a certain threshold take on that threshold's value, so the genuine value may be equal to the threshold, but it could also be greater. Values that fall at or below a certain threshold are censored in the case of censoring from below.

3.8 Summary

The research design employed in this study is briefly described in this chapter. The goal of this research is to examine the impact of macroeconomic variables on the number of companies getting listed on the Bursa Malaysia each year. Data for each variable was collected on a yearly basis from 1980 to 2020. The Bursa Malaysia, DataStream, and reports and journals are some of the places where variable data is acquired. A series of empirical tests will be conducted on all data. The test includes descriptive analysis, correlation analysis, multicollinearity, as well as Tobit Regression model. In the following chapter, the exam's findings will be highlighted and analysed. The tests' empirical results are expected to provide insight into the hypothesis' claim.

CHAPTER 4: ANALYSIS AND RESULTS

4.1 INTRODUCTION

This chapter will explain and address the hypothesis that has been supported by the empirical outcomes of all of the experiments that have been conducted and examined following multiple data investigations. The E-Views software is used to connect independent and dependent variables. In this study, the descriptive analysis, test on assumptions, correlation analysis, and regression analysis methodologies were used. This study has used data from the DataStream for the past 20 years.

4.2 DESCRIPTIVE ANALYSIS

The descriptive statistics for the data used in this inquiry are shown in Table 4.1. The table above summarises descriptive analysis statistics for dependent and independent variables for the number of IPOs (NIPO) in Malaysia each year with the influence of macroeconomics towards it. Descriptive analysis is a transient descriptive coefficient that summarizes a given data set that can either be an analogy of the whole population. The total number of observations is 41, with data collected on an annual basis from 1980 to 2020. The information was derived from four financial indicators given in the DataStream. It is used to provide an overall impression of values that might be interpreted as a central tendency to evaluate the outcome of independent variables such as Gross Domestic Product (GDP), Interest Rate, Stock Market Performance (KLCI), and Inflation Rate in relation to the number of IPOs each year.

Table 4.1

	NIPO	GDP	INF	IR	KLCI
Mean	299.56098	5.532432	2.810977	4.759829	958.7307
Median	22.0000	5.943152	2.662515	4.467531	876.7500
Maximum	92.0000	10.00270	9.70000	22.95688	1866.960
Minimum	0.0000	-7.359415	-1.138702	-3.90338	233.4800
Standard Deviation	23.75821	3.890014	1.980774	4.767325	529.081
Skewness	1.107470	-1.595561	1.021368	1.344191	0.271487

Kurtosis	3.421891	5.678604	5.144815	6.793189	1.658338
Observations	41	41	41	41	41

Table 4.3 Result of Descriptive Analysis

The mean is the average of the total value of all variables. This indicates that the average amount of companies going public each year from 1980 to 2020 is 29.56098. When looking at the standard deviation, which is the dispersion from the mean for number of IPOs (NIPO) is 23.75821. As the overall number of IPOs being listed each year, the yar with the highest amount of companies going public is 92 companies going public in the year 1996 which includes both main board and second board companies while the year with the lowest amount of companies going public is 0 in 1980 as no companies went public that year. Following that, the median which is signifying or referring to a value or quantity that is located in the middle of a frequency distribution of observed values or quantities, with an equal chance of falling above or below it, and the study reveals that NIPO obtained 22 companies. Furthermore, the skewness of the NIPO data is 1.107470, suggesting that the distribution of the probability is positive in value and showing a longer tail on the right of the distribution of probability of the sample. The 3.421891 kurtosis shows that the distribution is low compared to the average.

The average value of the Gross Domestic Product (GDP) is 5.532432. the average GDP value is not normal as it is more than 5%. When observing the standard deviation of GDP, the value is 3.890014, which is the value of dispersion from its mean. The year with the highest GDP record for the past 30 years was in the year 1996 with a value of 10.0027 that year. Whereas the year with the lowest GDP record since 1980 is 1998 with a GDP of -7.3594. Furthermore, the median amount for GDP recorded was 5.943152. In addition to that, the skewness of the data for GDP is -1.595561, suggesting that the distribution of the probability is negative in value and showing a longer tail on the left side of the distribution of probability of the data. Kurtosis is to measure the flatness or tallness of the variables. The kurtosis value for GDP is

5.678604 which is slightly higher compared to the mean of GDP.

The mean is the average of the total value of all variables. This indicates that the average amount of Inflation rate (INF) each year from 1980 to 2020 is 2.810977. When looking at the standard deviation, which is the dispersion from the mean for INF is 1.980774.
The year with the highest rate of inflation would be the year 1981 with a 9.7% increase of inflation rate. On the other hand, the year with the lowest rate of inflation is the year 2020 with an inflation rate of -1.1387%. Following that, the median which is signifying or referring to a value or quantity that is located in the middle of a frequency distribution of observed values or quantities, with an equal chance of falling above or below it, and the study reveals that INF obtained 2.662515. Furthermore, the skewness of the INF data is 1.021368, suggesting that the distribution of the probability is positive in value and showing a longer tail on the right of the distribution of probability of the sample. The 5.144815 kurtosis shows that the distribution is high compared to the average.

The average value of the Interest Rate (IR) is 1.759829. the average IR value is not normal as it is more than 5%. When observing the standard deviation of IR, the value is 4.77325, which is the value of dispersion from its mean. The year with the highest Interest rate increase for the past 30 years was in the year 1986 with a value of 22.9569 that year. Whereas the year with the lowest interest rate record since 1980 is 2008 with an interest rate of -3.9034. Furthermore, the median amount for IR recorded was 4.467531. In addition to that, the skewness of the data for IR is 1.344191, suggesting that the distribution of the probability is positive in value and showing a longer tail on the right side of the distribution of probability of the data. Kurtosis is to measure the flatness or tallness of the variables. The kurtosis value for IR is 6.793189 which is slightly higher compared to the mean of IR.

The mean value of Stock Market Index (KLCI) is 958.7307. When observing the deviation of the KLCI value, the standard deviation, the value is 529.3081. The year where the KLCI was at its highest was in 2013 with a value of 1866.96 and the lowest was in 1985 with a value of 233.48. In addition to that, the median amount for KLCI recorded is 876.7500. Furthermore, the skewness of the data for KLCI is 0.271487, which suggests the distribution of the data is positive in value thus showing a longer tail on the right side of the distribution. Kurtosis, which is the value to measure the flatness or tallness of the variables, and the KLCI has a kurtosis value of 1.658338 which is lower compared to the average of KLCI.

4.3 CORRELATION ANALYSIS

The purpose of correlation research is to determine the link between variables. The correlation matrix between the changes in the dependent variable and the independent variables in this study is shown in Table 4.2. A correlation number near to -1 indicates a strong negative link, whereas a correlation value close to +1 indicates a strong positive relationship. There is no correlation between the variables because the correlation value is zero. The level of significance has been set at 5%, which is equal to 0.05.

Table 4.2

Variables	Correlation	Probability
NIPO, GDP	0.307517	0.05
NIPO, INF	-0.040881	0.7997
NIPO, IR	-0.280523	0.0756
NIPO, KLCI	0.062548	0.6976

Table 4.2: Result of Correlation Analysis

Note: The dependent variable is number of IPOs (NIPO). The independent variables are the Gross Domestic Product (GDP), Inflation rate (INF), Interest rate (IR), and Stock Market Index (KLCI).

4.3.1 Gross Domestic Product Ratio

GDP and NIPO is 0.3075 which is a positive correlation between the two variables. Meanwhile, the probability value is 0.05 which indicates that the GDP has an significant relationship with NIPO as it is just at 5 percent of significance level.

4.3.2 Inflation Rate Ratio

INF and NIPO have a negative correlation with each other with the value of -0.0409.

The p-value that the two variables share is 0.7997 which shows that INF has an insignificant relationship with NIPO as it is above the 5 percent significance percentage.

4.3.3 Interest Rate Ratio

IR and NIPO are -0.2805 which is a negative correlation with each other. The p-value that these two variables share together proves itself to be insignificant with a value above the 5 percent significance line with a percentage of 0.076.

4.3.4 Stock Market Index Ratio

KLCI and NIPO have a positive corelation with each other with 0.0625. Meanwhile, the two do not have a significant relationship between each other as it has a p-value of 0.6976 which is above the 5 percent significance level.

4.4 Multicollinearity

The centred variance inflation factor (VIF) is used in table 4.3. The term centred variance inflation factors (VIF) refer to the amount of multicollinearity that occurs in a regression study.

Variables	Centered VIF
C	NA
GDP	1.203196
INF	1.240157
IR	1.335718
KLCI	1.386482

Table 4.3 shows the centered VIF which is used to identify if there exists a serious multicollinearity problem. The centred variance inflation factors (VIF) are used to describe the degree of multicollinearity in the regression study. The centred VIF for this study suggests that all variables are not multicollinear because it is less than 10, which is 1.2032, 1.2402, 1.3357, 1.3865 for GDP, INF, IR, and KLCI respectively. As a result, it is clear that none of the independent variables have a multicollinearity problem.

4.5 Tobit Regression Model

The tobit model, also called a censored regression model, is designed to estimate

linear relationships between variables when there is either left- or right-censoring in the dependent variable (also known as censoring from below and above, respectively).

VARIABLE	COEFFICIENT	PROBABILITY
GDP	1.847280	0.05
INF	-2.244650	0.2520
IR	-1.152546	0.175
KLCI	-0.002066	0.7889

Table 4.4: Results of Tobit Regression Model

Tobit Regression Model was used to investigate the association between IPO volume and macroeconomic factors. The data spans 30 years, with one year having no IPOs; as a result, the data is filtered. This model can rightly be used in a situation when the dependent variable are zero while at the same time the independent variable is not zero so the data need to be censored. The equation shows the impact of macroeconomic factor on number of IPO's. This equation provides the estimation based on the number of IPO's:

$$NIPO = \beta_0 + \beta_1 GDP + \beta_2 INF + \beta_3 IR + \beta_4 KLCI + e$$

Whereas NIPO shows the number of IPOs which is the dependent variable, β_0 is the intercept of the equation, GDP is the gross domestic product, INF is the inflation rate, IR is the interest rate, and KLCI is the stock market index. This shows a significant relationship between GDP and IPO as GDP shows a value of 0.05 which is at the threshold of 5%. INF which is inflation rate does not have a significant relationship with the dependent variable with the value of 0.2520 which is above 5%. Interest rate and KLCI both show a negative relationship significance with the values at 0.1705 and 0.7889 respectively. Results of this analysis are also supported by prior empirical literature (Ameer, 2012).

4.6 Summary

To surmise, this chapter presents the debates on the stated results in order to examine the findings on the tests and assumptions to be done and adhered to in this study. Before the researcher may analyze the results, empirical queries on econometric issues must be altered and accurately answered. Among the analytical findings addressed are descriptive testing analysis, correlation testing, multicollinearity testing, and regression analysis. The researcher will describe the overall findings of this investigation in the next chapter.

Table 4.5: Summary of the result

Variables	Correlations	Results
Gross Domestic Product	H_A: There is a significant relationship between GDP and Number of IPOs listed.	Positively Significant relationship
Inflation rate	H_O: There is no significant relationship between Inflation Rate and Number of IPOs listed.	Negatively Insignificant relationship
Interest rate	H_O: There is no significant relationship between Interest Rate and Number of IPOs listed.	Negatively Insignificant relationship
Stock Market Index	H_O: There is no significant relationship between KLCI and Number of IPOs listed.	Negatively Insignificant relationship

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 introduction

This chapter will end the analysis based on the summation of data obtained from the research study, as well as generate a few suggestions for the conclusion of the results. Making ideas acts as a road map for future study in order to improve outcomes and ensure more precise and accurate results.

5.2 Conclusion on Main Findings

Lastly, the research objective is to investigate the relationship between number of IPOs each year which is listed on Bursa Malaysia, and Gross Domestic Product (GDP), Inflation rate (INF), Interest rate (IR), and Stock Market Index (KLCI) which are find in Datastream. The data for this study were gathered between 1980 and 2020.

5.2.1 Gross Domestic Product

Gross Domestic Product is the total monetary or market worth of all finished goods and services produced inside a country's borders over a given period of time. It serves as a comprehensive scorecard of a country's economic health because it is a wide measure of entire domestic production. The analysis shows that the relationship of gross domestic product and number of IPOs each year has a positive relationship using the Tobit regression model. The covariance value between the two variables show a positive correlation with a value of 0.3075 but the probability value is 0.050 which indicates that the GDP has an insignificant relationship with the dependent variable. Descriptive analysis has also supported this result, as it reveals that the mean gross domestic product is 5.532432, indicating that the higher the GDP value, the more likely companies are willing to go public within the market. It demonstrates that going public before a rise in gross domestic product will bring an early birds advantage of being recognized in the public market.

The result of this research is consistent with the findings from Raheem, Khan, and Malik (2020) and Rashid (2012). In addition to that, a study done by Meluzín, Tomá; Zinecker, Marek; Lapi´nska, Justyna (2014) showed a positive relationship between GDP and IPO but has a lesser relationship strength between the variables. Those in charge should concentrate their efforts on increasing GDP and thereby promoting their economy in order to promote IPOs (Raheem et al., 2020)

5.2.2 Inflation Rate

Inflation is the gradual loss of a currency's buying value over time. The increase in the average price level of a basket of selected goods and services in an economy over time can be used to calculate a quantitative estimate of the rate at which buying power declines. A rise in the general level of prices, which is frequently stated as a percentage, signifies that a unit of currency now buys less than it did previously. The analysis shows the coefficient value of Inflation rate is -2.24460. As a result, the inflation rate has a negative relationship with the amount of companies going public. The inflation rate has a probability value of 0.2520 which reveals that the inflation rate has a weak significance with IPO listings as it is more than 5%. In addition to that, using descriptive analysis, the results reveal a value 2.811 which proves a significance between the two variables. It demonstrates that inflation rate can negatively affect the amount of companies listing for the public.

The result of this research is consistent with the findings of Rasheed (2012), Mehmood, Rasidah, and Ong (2021), and Raheem, Khan, and Malik (2020) which shows that the inflation rate can negatively affect the rate of IPOs.

5.2.3 Interest Rate

The monetary payment for the privilege of borrowing money is known as interest, and it is usually stated as an annual percentage rate (APR). The amount of money a lender or financial organisation earns for lending out money is known as interest. The interest rate is a proportion of the principal—the amount borrowed—that a lender charges a borrower. The analysis results suggests that the coefficient value for interest rate is -1.1525. As a result, the interest rate has a negative relationship with number of IPOs listed each year. The interest rate has a p-value of 0.1705. Thus, it indicates that the interest rate has an insignificant relation ship as it is more than 5% level of significance.

The result of this research is consistent with findings from Mehmood, Rasidah, and Ong (2021) and Rees (1997) which have produced results similarly with an insignificant relationship between interest rates and IPOs. On the other hand, Rasheed (2012) and Raheem, Khan, and Malik (2020) shows that the interest rate has a significant impact towards public listings.

5.2.4 Stock Market Index

A market index is a fictitious investment portfolio that reflects a portion of the financial market. The prices of the underlying holdings are used to calculate the index value. Market-cap weighting, revenue weighting, float weighting, and fundamental weighting are all used to calculate the values of several indices. A approach of modifying the individual impact of elements in an index is to weight them. The result of the analysis shows the coefficient -0.0020 for stock market index. Thus, the stock market index has a negative relationship with the number of IPOs listed. The p-value of stock market index is 0.7889, resulting in an insignificant relationship with the amount of companies going public as it is more than 5%. As for the descriptive analysis, 958.7307. This shows that the mean for stock market is quite high in comparison to the number of IPOs listed each year.

The result of this research is consistent with the findings from Kovandova and Zinecker (2015). Brzeszczynski (2014) concluded that in most emerging market countries there is a time lag between movements of the stock market index and decisions to launch new IPOs. However, Rasheed (2012) and Raheem, Khan, and Malik (2020) findings have found that the stock market index has a significant relationship with the number of IPOs being listed.

5.3 Recommendations for further studies

5.3.1 Other tests can be used to look into the study's goals

Descriptive analysis, correlation analysis, multicollinearity, and Tobit regression are the only types of tests used in this study. Other types of tests, such as the white test, pooled ordinary least squares, normality test, and others, could be used in future studies. In terms of significant variables, this will be more relevant, and the outcomes will be favourably associated.

5.3.2 Study upon multiple countries

To discover more about the impact of macroeconomic conditions on the number of IPOs launched each year in different countries, such as Singapore or Japan. As a result, increased and ongoing efforts to educate and train more human resources through the establishment of more educational and training centres can be a critical factor in the understanding and development of market instruments such as other countries in this study, as well as improving the solidity of the conclusions.

5.3.3 Use or add different variables

In this study, just four internal indicators are used as independent variables, and only one is used as a dependent variable. The researcher has chosen to employ just the gross domestic product, inflation rate, interest rate, and stock market index as independent variables in this research. For instance, political clout, consumer purchasing power, unemployment rate, and so on. If the sample size is higher, the accuracy of the results will improve as well. Perhaps, if given enough time, researchers will be able to reach a more firm conclusion.

5.4 Recommendations for companies

5.4.1 Finding better times to list on IPO

Companies can have a better foresight with the results of the findings. As a company, going public is a significant moment in the company's life, having a better opening for the IPO in Bursa Malaysia will improve the public's outlook on the company.

5.5 Summary

This chapter concludes with an explanation of the study's findings. In addition, the reader will receive advice in this chapter to assist them in obtaining the information required to conduct the study. As a result, the study's findings and recommendations give the reader and other researchers a better knowledge of the problem.

5.5.1 Summary of the results

Research Question	Results	Supporting Articles	
What is the relationship between Growth Domestic Product (GDP) and the number of IPOs in	Gross Domestic Product has a significant relationship and has influence over the number of IPOs listed each year. Increase in GDP by	Because consumption demand, as well as monetary and fiscal policies, drive GDP growth rates, good macroeconomic performance can lead to economic balance and a	Raheem, Khan, and Malik (2020)

Malaysia?	1% will increase the number of IPOs by 1.85%.	reduction in the risk of instability. Thus, an increase in GDP will lead to an increase in IPO variability.	
		The ratios of stock market capitalization to GDP and total value traded to GDP increased as the number of listed companies increased.	Rasheed (2012)
What is the relationship between interest rates and the number of IPOs in Malaysia?	Interest Rate has a insignificant relationship towards the amount of companies going public each year. An increase of 1% in interest rate will decrease the number of IPOs by 1.15%.	Meanwhile, due to stock price efficiency, which boosts market participants' confidence, the interest rate has a non-linear effect on IPO variability, resulting in greater IPO issuances. As a result, a company's choice to go public is influenced by a range of macroeconomic factors that affect the financial market's appeal.	Raheem, Khan, and Malik (2020)
What is the relationship between the Stock market performance (KLCI) and number of IPOs	Stock market performance has no influence towards the amount of companies listing for IPO. An increase of 1% in	The number of initial public offerings in emerging markets and their profitability are linked to macroeconomic conditions, business	Brzeszczynski (2014)

in Malaysia?	the stock market index will decrease the number of IPOs by 0.002%.	cycles, and stock market activity. There is a temporal lag between stock market index fluctuations and decisions to launch new IPOs in most developing market countries.	
What is the relationship between the inflation rate and the number of IPOs in Malaysia?	Inflation has an insignificant relationship with the volatility of companies being listed for IPO. An increase of 1% in inflation rate will decrease the number of IPOs by 2.24%.	TBR and inflation are proven to have negative effects on NIPO in the short term. TBR rates are the primary benchmark from which all other yields are calculated around the world, and they are one of the most risky investment options available to investors.	Mehmood, Rasidah, and Ong (2021)

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APPENDICES

YEAR	IPO NUMBER	GDP Growth	Inflation rate	interest rate
1980	0	7.441826784	6.674919535	3.045538127
1981	5	6.942104199	9.7	10.71638514
1982	8	5.943152455	5.81890003	9.590517575
1983	10	6.252230815	3.704235463	5.537334858
1984	14	7.76179012	3.897272601	7.077983515
1985	4	-1.025250251	0.346458791	14.38950648
1986	5	1.240594926	0.737002855	22.95687765
1987	5	5.191932111	0.290007909	2.503824189
1988	6	9.937719677	2.556519453	5.481540543
1989	13	9.059600866	2.813200897	4.244741986
1990	31	9.00852714	2.617801047	4.795417725
1991	39	9.545467414	4.358333333	5.56337121
1992	45	8.885117978	4.7672283	7.564791778
1993	44	9.894943334	3.536585366	5.812133912
1994	66	9.212041793	3.724970554	4.643983009
1995	51	9.829085197	3.450575096	4.917892769
1996	92	10.00270069	3.488559459	6.041122478
1997	88	7.32274185	2.662514597	6.90550976
1998	28	-7.359415188	5.270342003	3.350681619
1999	21	6.137612011	2.744561302	8.514010655
2000	38	8.85886817	1.534740237	-1.085738977
2001	20	0.517675319	1.416784732	8.848512896
2002	51	5.390988307	1.807872463	3.296312371
2003	58	5.788499286	1.089676326	2.906032398
2004	72	6.783437724	1.421271159	0.034478791
2005	79	5.332139161	2.975070927	-2.673174104
2006	40	5.584847067	3.609235642	2.409000977
2007	26	6.298785927	2.027353178	1.456735347
2008	23	4.831769889	5.440782211	-3.903381938
2009	14	-1.513528716	0.583308406	11.78239296

2010	29	7.424847383	1.622852356	-2.113277326
2011	28	5.293912834	3.174470922	-0.471868634
2012	17	5.473454193	1.663571025	3.748419374
2013	17	4.693722526	2.105012312	4.467530817
2014	15	6.006721946	3.142990509	2.068518216
2015	13	5.091532422	2.104389802	3.307037704
2016	12	4.449781398	2.090566595	2.825945183
2017	14	5.81272241	3.871201158	0.79892604
2018	22	4.769927024	0.884709161	4.226493082
2019	30	4.302815982	0.662891866	4.810227407
2020	19	-5.587744678	-1.138702154	4.76068725

	NIPO	GDP	INF	IR	KLCI
Mean	29.56098	5.532432	2.810977	4.759829	958.7307
Median	22.00000	5.943152	2.662515	4.467531	876.7500
Maximum	92.00000	10.00270	9.700000	22.95688	1866.960
Minimum	0.000000	-7.359415	-1.138702	-3.903382	233.4800
Std. Dev.	23.75821	3.890014	1.980774	4.767325	529.3081
Skewness	1.107470	-1.595561	1.021368	1.344191	0.271487
Kurtosis	3.421891	5.678604	5.144815	6.793189	1.658338
Jarque-Bera	8.685089	29.65356	14.98721	36.92679	3.578746
Probability	0.013003	0.000000	0.000557	0.000000	0.167065
Sum	1212.000	226.8297	115.2500	195.1530	39307.96
Sum Sq. Dev.	22578.10	605.2882	156.9386	909.0954	11206684
Observations	41	41	41	41	41

Covariance Analysis: Ordinary
Date: 01/20/22   Time: 06:38
Sample: 1980 2020
Included observations: 41

Correlation t-Statistic Probability	NIPO	GDP	INF	IR	KLCI
NIPO	1.000000				

GDP	0.307517	1.000000			
	2.018243	-----			
	0.0505	-----			
INF	-0.040881	0.325949	1.000000		
	-0.255513	2.153141	-----		
	0.7997	0.0376	-----		
IR	-0.280523	-0.242860	-0.051821	1.000000	
	-1.825147	-1.563468	-0.324061	-----	
	0.0756	0.1260	0.7476	-----	
KLCI	0.062548	-0.096959	-0.306969	-0.401376	1.000000
	0.391377	-0.608374	-2.014274	-2.736711	-----
	0.6976	0.5465	0.0509	0.0093	-----

Variance Inflation Factors
Date: 01/20/22   Time: 07:15
Sample: 1980 2020
Included observations: 41

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	222.3733	17.35383	NA
GDP	1.044348	3.697733	1.203196
INF	4.151624	3.800188	1.240157
IR	0.771927	2.700526	1.335718
KLCI	6.50E-05	6.048933	1.386482

Dependent Variable: NIPO
Method: Least Squares
Date: 01/20/22   Time: 18:36
Sample: 1980 2020
Included observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	1.824373	1.021933	1.785218	0.0827
INF	-2.012994	2.037554	-0.987947	0.3298
IR	-1.191819	0.878594	-1.356507	0.1834
KLCI	-0.002513	0.008062	-0.311755	0.7570
C	33.20879	14.91219	2.226957	0.0323

R-squared	0.162304	Mean dependent var	29.56098
Adjusted R-squared	0.069227	S.D. dependent var	23.75821
S.E. of regression	22.92111	Akaike info criterion	9.215843
Sum squared resid	18913.58	Schwarz criterion	9.424815
Log likelihood	-183.9248	Hannan-Quinn criter.	9.291939
F-statistic	1.743758	Durbin-Watson stat	0.502534
Prob(F-statistic)	0.161809		