

The Effect of the Indihome Spin Off from PT Telkom Indonesia (Persero) and the Merger of Indihome with Telkomsel on TLKM Shares on the IDX and TLK Shares on the NYSE

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Abstract—The world of telecommunications in Indonesia cannot be separated from the role of PT Telekomunikasi Indonesia Tbk, as the largest and long-established telecommunications company and has even become a determinant of the development of telecommunications technology in the country. In the past, conventional telephones installed in homes to communicate long distances were the forerunner of a new civilization for the advancement of telecommunications. However, in the middle of 2023, Telkom will release Indihome, aka spin off, Indihome is identical to conventional telephones owned by Telkom. This decision will make the company more effective and efficient and what will be the impact on the capital market, especially the response of local and foreign investors. This research uses two statistical analysis test methods, namely Mann Whitney and Spearman. Data analysis using SPSS, comparative tests, namely before and after the spinoff. The data object is stock price movements. The results shows that not all management decisions have a positive impact, as can be seen from the response of local and foreign stock investors to the existing sentiment. Referring to the assumption that Indihome joining Telkomsel does not necessarily mean that Singtel's ownership in Telkomsel will disappear even if dilution occurs. Apart from that, Indihome has a large contribution to Telkom, thereby affecting Telkom's revenue in the near future. Although the long-term target of reducing opex and capex can be realized.

Keywords: Telecommunications; Spin Off; Telkom; Indihome; Telkomsel; Capital Markets

1. INTRODUCTION

The presence of the telecommunications for the first time was a new civilization for humans to improve the quality of life, especially information and to obtain quality information, it also needed to be supported by advanced technology. Meanwhile, obtaining information is a human right to obtain it, so the development of the telecommunications industry is eagerly awaited, apart from that, as a human civilization, the role of technology-based telecommunications is very important to make changes towards improvement, especially in the current era of digitalization, telecommunication as a means of and communication media infrastructure to interact with one another both within the country and abroad, making telecommunications an inevitable need for information and considered as a means to increase economic growth (Daud et al., 2021).

It cannot be denied that the Covid-19 pandemic has encouraged the acceleration of the use of digitalization in all sectors, including the telecommunications industry sector which has also experienced rapid development in the last three years with the result being various digital technology innovations to create the best customer experience (Ikhsan et al., 2023). The development of the telecommunications industry is increasingly focusing on digital technology innovation which is expected to facilitate customer activities. For example, 5G technology, artificial intelligence, cloud and cyber security have become the prima donna of digital technology

Each company has its own business plan before starting to establish a company, this can be seen from the vision and mission it has to achieve the company's goals. To achieve the goals of stakeholders such as owners or largest shareholders, it is necessary to determine the right strategy to be implemented in order to achieve a goal that is in accordance with initial planning and of course adapts to current and future conditions. The development of information technology and information systems really supports strategic plans by companies to accelerate implementation that produces added value for the company. One company that has used information technology is PT Telekomunikasi Indonesia (Telkom) (Wiyono & Wijaya, 2020).

Telkom Indonesia is the largest telecommunications company in Indonesia and was founded during the colonial era. In the past, Telkom was famous for its long-distance communication services using fixed line telephones, namely telephones using cables installed as facilities and infrastructure inside the house and outside the house, such as telephones that used coins or cards, located in public places or what was usually called public telephones and wartels (telephone stalls). However, with the development of time and increasingly sophisticated technology, the telecommunications system has shifted to cellular telephones where telephones no longer use cables or are called wireless or use mobile devices so that it is easier to communicate anywhere via mobile and is more practical.

It should be remembered that Telkom Indonesia is a public company where some of its shares have been listed on the Indonesia Stock Exchange with the stock code TLKM and its shares are also listed on the New York Stock Exchange with the stock code TLK, so Telkom is the first state-owned company to carry out a dual listing by being listed on two stock exchange since 1995, after that PT Aneka Tambang with its shares was listed on the Indonesian Stock Exchange and on the Australian Stock Exchange in 1999. Being listed on two stock exchanges means that the company has sold its shares to the public or what is called an IPO (Initial Public Offerings) domestically and abroad,

then shares are not only owned by Indonesian investors but also investors abroad. The advantage for companies that do this is that they can increase access to capital and financing from within the country and abroad.

Telecommunications issuer PT Telkom Indonesia (Persero) Tbk. targeting 1 million new customers from the Fixed Mobile Convergence (FMC) Telkomsel–Indihome product. Indihome subscribers are around 9.2 million subscribers, this year FMC hopes to add more than 1 million Indihome subscribers. Referring to Telkom's financial report per quarter I-2023, Indihome's contribution is IDR 7.19 trillion or the equivalent of 20% of the Telkom Group's overall revenue, this shows that Indihome is the second largest contributor after Telkomsel. Indihome is synonymous with a vital organ like the heart in the body of Telkom itself, famous for its fixed line telephone service business installed in homes and attached to its internet service as support.

It is hoped that the merger of the Indihome (Telkom) business with Orbit (Telkomsel) will be able to increase financial efficiency including EBITDA because there will be capex and opex savings. Previously, Plaza Telkom and Grapari, which were previously separate, will later be able to unite and allow them to cross sell products. With the merger of IndiHome and Orbit, it is hoped that customer reach will also become wider and fast internet service can also be achieved, because with 5G technology the speed will be close to broadband speed. Becoming one of the leading solutions that will open up more convenience opportunities for Telkomsel customers to enjoy equal digital connectivity. The current penetration of the fixed broadband market share in Indonesia is still only 15 percent, even though the fixed broadband market in Indonesia is still very wide, so to attract more customers, it can be seen from the Covid-19 pandemic that there has been a shift in people's options for working and studying at home to subscribe fixed broadband service.

In 2022, Telkom Indonesia will carry out various strategies and one of them is called the Conditional Spin off Agreement (CSA), namely separating one of the business units owned by Telkom, called IndiHome, and then combining it with Telkomsel, which is a subsidiary of Telkom Indonesia itself. Indihome stands for Indonesia Digital Home and has several communication and data services such as landline telephone (voice), internet (internet on fiber or high speed internet) and interactive television services.

In accordance with POJK regulations 17/2020, if there is a material transaction and contains affiliated transactions for the company, approval from independent shareholders is required at the GMS (General Meeting of Shareholders). Telkom's GMS which will be held on May 30 2023 has a spin off and dividend distribution agenda. The results of the GMS were carried out in the form of a spin off agreement, continuing on July 1 2023, Indihome officially merged with Telkomsel and was no longer under the auspices of Telkom. PT Telekomunikasi Selular aka Telkomsel has officially launched Fixed and Mobile Broadband service products under the Telkomsel One brand. This new product marks the start of Telkom's battle in the domestic FMC market, after merging Indihome into Telkomsel and focusing more on the individual and household consumer segments. It is hoped that the results of this research will provide benefits to the Indonesian government, stakeholders, local investors and foreign investors.

Telecommunications is a technique for sending or transmitting information over long distances from one place to another, in the form of writing, sound, images or other objects. Telecommunications itself has been around since the 18th century and is now developing very rapidly (Candra Laili, 2023). In Indonesia, telecommunications has been controlled by foreigners since colonial times, precisely when Telkom was just founded. In 1856, the first telecommunications network in Indonesia was built to connect Jakarta with Bogor by Post Telegraph Telefoon, which is now known as PT Telkom Indonesia. Indosat was also founded in 1967 with foreign investors. It was only in 1980 that the Indonesian government took over all of Indosat's shares, making it a state-owned company. However, in 1993, foreigners were again involved in the telecommunications industry in Indonesia. When Telkom and Indosat were appointed as two local telecommunications providers who carried out monopolistic practices, due to limited funds owned by the government and telecommunications operators. The development of telecommunications infrastructure, especially local fixed wireless networks, is carried out through collaboration between Telkom or Indosat and foreign investment companies in providing basic telecommunications services.

In Indonesia, telecommunications began with the presence of NMT (Nordic Mobile Phone) which initially used an analog system. However, a year later, the technology shifted to Modified NMT with the AMPS (Advance Mobile Phone System) system. In 1993, the GSM industry began to develop in Indonesia with PT Telkom's digital cellular pilot project

Indonesia, with its high population, has attractive cellular telecommunications business opportunities. Wireless telecommunication technology continues to develop, starting from 1G, 2G, 3G, 4G and now entering the 5G era. Starting with the presence of NMT and AMPS technology which focuses on voice communication, cellular communication technology is increasingly developing rapidly, followed by the emergence of GSM and CDMA technology and the introduction of short message services and low speed data services. In 1985-1993, initial developments in telecommunication development continued to be accelerated in line with economic growth and increasingly high demand for telephone connections. One of them is by trying to provide telecommunications facilities via public telephones. Public telephones developed and appeared in several technological variations, ranging from coin public telephones, cards and telecommunications kiosks (Wartel). Cellular telecommunication currently circulating in Indonesia uses 1G analog technology (AMPS) with an average weight of 430. Progress in cellular telecommunications was increasingly felt in 1993-2000. The number of mobile telecommunications users is starting to show growth. This is driven by several factors such as the size of the device which is getting smaller, lighter so it is easy to carry and is no longer a luxury item ((Permadhie, 2018). Apart from that, GSM operators are starting to

emerge that offer advantages over AMPS technology, such as SIM cards. In 2000, cellular telephone subscribers experienced a rapid increase, amounting to 3,669,327 SST.

Technological developments & Indonesian Telecommunication Reform in 2006 were marked by the success of three cellular operators in Indonesia in obtaining 3G service licenses. The number of cellular service users in Indonesia is also experiencing an explosion. Cellular service subscribers from the three biggest operators (Telkomsel, Indosat and Excelcom) reached 38 million. The government, through the Ministry of Communication and Information, issued Permenkominfo No. 01/2006 dated 13 January 2007 concerning Arrangement of the 2.1 GHz Radio Frequency Band for the Operation of local fixed networks with limited mobility that can only operate in the 1900 MHz radio frequency band until 31 December 2007

The development of cellular telecommunications has entered the advanced stage from 2008 until now. In 2009, it was estimated that the total number of cellular service users was up to 175.18 million, where the population in Indonesia that year reached around 240 million. In 2013, the telecommunications company Internux launched the first 4G LTE service in Indonesia, namely Bolt Super 4G LTE. This service uses Time Division Duplex (TDD-LTE) technology on a frequency of 2300 MHz and Bolt with data access speeds of up to 72 Mbps. 2022 has been a year full of challenges for the telecommunications sector, due to increasingly tight competition so that telecommunications service providers experience efficiency by looking at customer developments and data service needs, the large number of operators has an impact on spectrum allocation being limited, with this limitation affecting the quality of the frequency spectrum for customers are decreasing, it cannot be denied that large operators are consolidating or merging such as Indosat Ooredoo and Tri Hutchison so that there are only 4 cellular operators in Indonesia. The digital transformation that needs to be carried out by the Indonesian government is equality of digital access, digital literacy and digital environmental security, data leaks related to cyber crime have the potential to cause economic losses. Along with the development of cellular telecommunications and digitalization, cellular network users in Indonesia are increasing. In 2013 it was recorded as reaching 313 million. This figure grew to 435 million in 2017 and 365 million in 2021. Cellular networks are also experiencing technological developments. In 2021 the 5G cellular network will begin operating commercially throughout Indonesia.

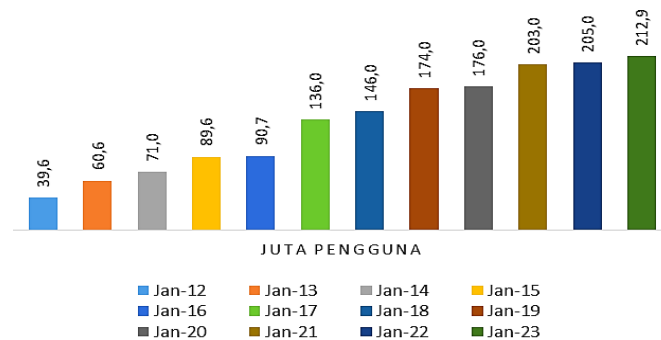


Figure 1. The Number of Internet Users in Indonesia (January 2012 - January 2023)

If we look at Figure 1. that the recorded number of internet users in Indonesia has reached 212.9 million in January 2023 which means that around 77% of Indonesia's population has used the internet. Looking at the trend, the number of internet users in Indonesia continues to grow every year. The surge in internet users in the country occurred in 2017. However, Indonesia is one of the countries where many residents are not connected to the internet. It is recorded that there are 63.5 million people in the country who will not be connected to the internet by early 2023

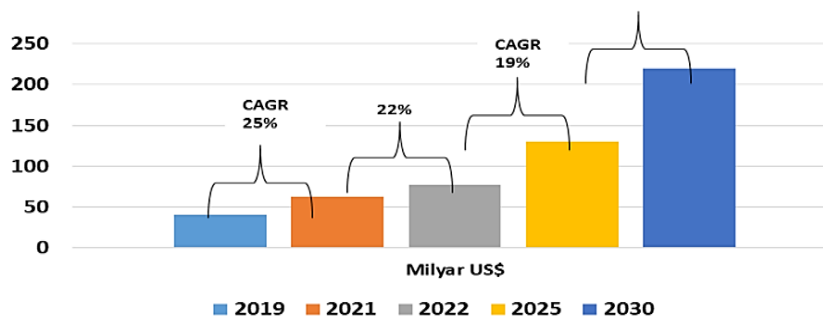


Figure 2. Overall Digital Economy Indonesia

Meanwhile, for overall digital economy Indonesia like showed at Figure 2. according to the sources of Google, Temasek and Bain, they projected that GMV (Gross Merchandise Value) of Indonesia's digital economy will reach up 22 percent from year 2021 to 2022, which means the nominal around US\$77 billion in 2022. In 2025, the country's digital economy will be projected to hit US\$130 billion with growth of 19 percent in a Compound Annual Growth Rate (CAGR)

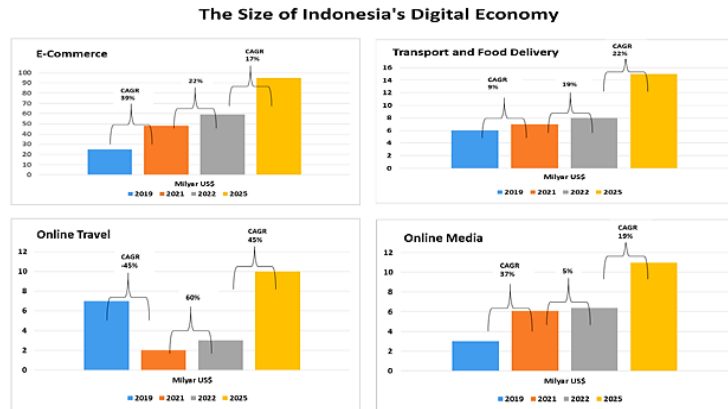


Figure 3. The Size of Indonesia's Digital Economy

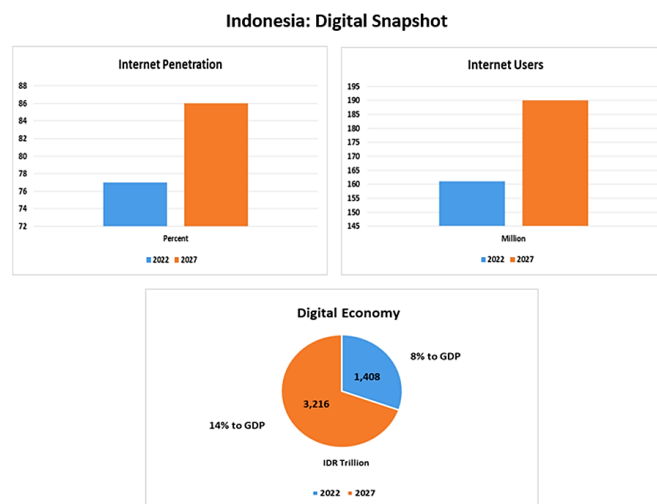


Figure 4. Indonesia Digital Snapshot

If we look at two figures which are Figure 3 and Figure 4. Those sectors are growing up although the online travel has been declining due to hit of covid 19 from 2019 up to 2022, many people disconnected of the traveling and to avoid the virus. Moreover in 2027 of pie chart that showed as the projected the digital economy will reach 14 percent of the GDP (Gross Domestic Product) which means increasing from 8 percent of GDP in 2022

On October 23, 1856, in the Dutch East Indies colonial era, the first electromagnetic telegraph operation that connected Jakarta and Bogor was started. This date is called the birth of telecoms in Indonesia. In 2004, Telkom launched an internet provider service called Speedy, based on asymmetric digital subscriber line and gigabit passive optical network access technology using a fiber optic network to homes, using telephone lines that can be used to make calls and simultaneously to access the internet. However, in 2015 the Speedy service was stopped by Telkom, then changed it to IndiHome, so all old customers moved to the Indihome service.

Indonesia Digital Home (IndiHome) is one of the service products from Telkomsel, a subsidiary of Telkom Indonesia in the form of communication and data service packages such as home telephone, internet and interactive television services. It is because of this offer that Telkom labels IndiHome as three services in one package (3-in-1) because apart from internet, customers also get pay TV shows and telephone lines.

The IndiHome package is also equipped with content such as digital music portal services and home automation. Since the launch of IndiHome, customers who subscribe to Speedy internet packages have been asked one by one to switch to IndiHome, because Speedy trading services will soon be discontinued in 2015.

IndiHome was officially launched in 2015. IndiHome is also one of the programs of Telkom's main project, Indonesia Digital Network 2015. In its implementation, Telkom collaborated with a number of telecommunications technology developers to build digital concept homes. Currently IndiHome provides several service packages including Single Play, Dual Play and Triple Play packages. Single play provides fiber optic connections with internet services with or without landline telephone, Dual play provides fiber optic connections with internet and home telephone services and Triple play provides fiber optic connections with internet services, landline telephone and IndiHome TV IPTV. PT Telekomunikasi Selular is the brand name of the GSM operator and UMTS Mobile telephone network operating in Indonesia. Telkomsel owns 35% of the shares in Singtel from Singapore, details of the share portion after the merger of Indihome into Telkom 69.9% and Singtel 30.1%, from previously 65% and 35% respectively, Singtel experienced dilution. This company was founded in 1995 and is a subsidiary of Telkom

Indonesia. This company provides customers with a choice between three prepaid cards simPATI, Loop and Kartu As or postpaid service kartuHALO as well as various services and programs (Sahara et al., 2017).

This company is the largest mobile telecommunications operator in Indonesia, operating 236,000 BTS units to serve more than 170 million customers, so that this company controls almost 60% of the mobile telecommunications market share in Indonesia in 2020. With the largest achievements, this company is also a mobile operator. sixth largest in the world. Working with 575 roaming partners, the company's services can now be used in 200 countries around the world. Fixed Mobile Convergence (FMC) is a combination of two different technologies, namely cellular technology and WI-FI, into one form of integrated service in one cellphone. FMC technology promises a communication service that is always on for customers who carry out mobile and fixed activities In simple terms, it can be described as follows: someone has a dual mode cellphone and subscribes to FMC services. Sometime in the morning before leaving

The FMC network will automatically channel the call to the WI-FI broadband network available at home. At that time, FMC will seamlessly move the ongoing conversation to the cellular network without any interruption. When in the office, all communications via the dual mode cell phone will again be served by the office WI-FI network. FMC can be viewed from several types of architecture, namely the UMA (Unlicensed Mobile Access) based type and the SIP (Session Initiation Protocol) based type. The UMA type is a type of FMC architecture that applies GSM tunneling technology over a WI-FI network where encapsulation of the signaling and bearer is carried out. The UMA model does not support the SIP protocol, so the existing MSC (Mobile Switching Center) can still be maintained and is responsible for switching and call control. Another type of FMC is based on the SIP protocol, namely the FMC model based on IMS (IP Multimedia Subsystem) technology whose standardization is carried out by 3GPP (The Third Generation Partnership Project). IMS is a next generation network (NGN) which is able to replace switch or exchange technology which is currently still based on circuits or TDM (Time Division Multiplexing).

The advantages when a company decides to go public are that it can increase the company's liquidity, provide the opportunity for diversification, influence the value of the company, and provide the public with the opportunity to assess the company more transparently (Rahmadewi, 2018). According to (Hartono, 2017) the advantages of going public include making it easier to increase capital in the future, increasing liquidity for shareholders and knowing the company's market value. The funds obtained from this IPO can be received and used directly by the company for company expansion, improving the working capital structure, and paying off part of the debt by offering to convert loans or debt into company share ownership so that the company's solvency can increase, the company can avoid being insolvent and avoid liquidity risks.

The underwriter can make an agreement in the form of a full commitment and/or best effort. If the full commitment requirement is used, the Underwriter must purchase all remaining unsold shares (Ejara & Haven, 2007). However, if the best effort requirement is used, the underwriter is only obliged to carry out all forms of best efforts to enable the shares offered in the initial offering to be purchased entirely by the public. Companies that go public will gain benefits and costs at the same time. Benefits are obtained from fresh funds entering the company, promotions and publicity through listings on the stock exchange. The costs incurred include: firstly, explicit costs, namely, costs for printing the prospectus, paying accountants, legal experts and the like. The two implicit costs are the costs of lost opportunities and tighter public supervision" (Widiarma, 2022). Shares are one of the capital market instruments that investors are most interested in because they provide attractive levels of profit. Shares can be defined as a sign of a person's or unilateral capital investment (business entity) in a company or limited liability company. By including this capital, the party has a claim on the company's income, a claim on the company's assets, and has the right to attend the general meeting of shareholders (GMS). Meanwhile, according to (Tumonggor et al., 2017) Shares are one of the capital market instruments most sought after by investors, because they are able to provide an attractive rate of return. Shares are paper that clearly states the nominal value, the name of the company, and is followed by the rights and obligations that have been explained to each holder. Then according to Darmadji and Fakhruddin (2012: 5).

Stocks are a sign of participation or ownership of a person or entity in a company or limited liability company. Shares are in the form of a piece of paper which states that the owner of the paper is the owner of the company that issued the securities. According to Darmadji and Fakhruddin (2012:6), there are several types of shares in terms of ability to collect or claim rights, so the types of shares are divided into:

- a) Ordinary shares (common stock), which are shares that place the most junior owner in the distribution of dividends and rights to the company's assets if the company is liquidated.
- b) Preferred shares are shares that have the characteristics of a combination of bonds and ordinary shares, because they can produce fixed income (such as bond interest), but may also not produce the results desired by investors.

Judging from how they are maintained, shares are divided into:

- a) Bearer stock means that the owner's name is not written on the share, so that it can be easily transferred from one investor to another.
- b) Shares in the name (registered stock), are shares where it is clearly written who owns them, and where the transfer must go through certain procedures.

Judging from their trading performance, shares can be categorized into:

- a) Blue-chip stock, namely ordinary shares from a company that has a high reputation, as a leader in a similar industry, has stable income and is consistent in paying dividends.

- b) Income shares, namely ordinary shares of an issuer that have the ability to pay dividends higher than the average dividend paid in the previous year.
- c) Growth stocks (growth stock-well known), namely shares from issuers that have high income growth, as leaders in similar industries that have a high reputation. Apart from that, there are also lesser known growth stocks, namely shares from issuers that are not leaders in the industry but have growth stock characteristics.
- d) Speculative shares, namely shares of a company that cannot consistently obtain high income in the future, even though it is not certain.
- e) Cyclical shares (counter cyclical stock), namely shares that are not affected by macroeconomic conditions or general business situations.

According to (Biondi, 2012), the form of shares is a piece of paper which states that the owner of the paper is the owner of the company. The ownership portion is determined by how much investment is invested in the company. The definition of shares according to (Rahmadewi, 2018), namely:

- a) Proof of ownership of capital/funds in a company.
- b) Paper that clearly states the nominal value, company name and is followed by the rights and obligations explained to each holder.
- c) Inventory ready for sale.

The Indonesian Stock Exchange is an exchange operating in Indonesia. The Indonesian Stock Exchange is an exchange resulting from the merger of the Jakarta Stock Exchange (BEJ) with the Surabaya Stock Exchange (BES). For the sake of operational and transaction effectiveness, the Government decided to merge the BEJ as a stock market and the BES as a bond and derivative market into the BEI. The exchange resulting from this merger began operating on December 1 2007 The Stock Exchange is a legal entity that has the task of being a means of carrying out and regulating the course of securities trading activities in the Capital Market. Meanwhile, if viewed from a microeconomic perspective for stock exchange members (issuers), the Stock Exchange functions to obtain capital that can be used to expand business. Meanwhile, from a macroeconomic perspective, the Stock Exchange has an important role in driving the country's economy. If securities trading shows positive results, then this picture can result in achieving positive performance in a country's economy, likewise if the opposite happens (Rehman, 2021). In essence, the stock exchange is a conventional market that brings together sellers and buyers. It can be defined that basically the activities carried out by the Stock Exchange are organizing and providing trading facilities or systems for its members

In 1990 the number of companies that had IPOs became 225 companies. In this period, IPOs became a national event and were widely known as the IPO boom period. This increase was also caused by many things, one of which was changing the base of the composite index to a base value of 500 until the third quarter of 1990 with listed securities increasing to 166 shares to 208 share issuers. As written in article 7 paragraph (1) of Law No. 8 of 1995 concerning Capital Markets, it has the task of carrying out securities trading in an orderly, fair and efficient manner, which is a trading transaction process that is carried out based on clear rules and is carried out consistently. Prices in securities trading must show a market mechanism based on the forces of demand and supply. Efficient securities trading is a trade where parties who have an interest in the securities can place orders easily and transparently, including fast transaction settlement and low costs (Davies & Dufour, 2008). In carrying out securities trading, the Stock Exchange is not without obstacles. There is a rapid globalization process in the financial industry, increasingly complex risk exposures are a consequence of advances in information and communication technology as well as financial innovation which has produced various complex financial products. Apart from that, the conglomeration of financial institutions is a hot issue to be discussed at the domestic, regional and global levels. Bearing in mind that trading transactions on the Stock Exchange are carried out by people who do not know each other, therefore trading transactions that occur on the Stock Exchange are very risky for violations and crimes. With this, the Stock Exchange must be able to protect the interests of many parties and create investors' confidence

Currently, BEI has several types of indexes, plus sectoral indices, these indices are: IHSG, IDX80 Index, LQ45 Index, IDX30 Index, IDX Value30, IDX Growth30, IDX ESG Leaders, IDX LQ45 Low Carbon Leaders, IDX High Dividend 20 Index, IDX BUMN20 Index, ISSI, JII70, JII, IDX-MES BUMN 17, IDX Sharia Growth, IDX Index SMC Composite, IDX SMC Liquid Index, Kompas100 Index, BISNIS-27 Index, MNC36 Index, Investor33 Index, Infobank15 Index, Sminfra18 Index, SRI-KEHATI Index, ESG Sector Leaders IDX KEHATI, ESG Quality 45 IDX KEHATI, PEFINDO25 Index, PEFINDO Index i-Grade, Main Board Index, Development Papapn Index, Sectoral Index. The New York Stock Exchange or what is often referred to as the NYSE is one of the largest stock exchanges in the world. This exchange is located at 11 Wall Street, Lower Manhattan, New York City, United States

The NYSE is operated by NYSE Euronext which was formed by the merger of NYSE with Euronext in 2007 to become the first global stock exchange. Euronext was formed in 2000 in the merger of the Amsterdam, Brussels and Paris stock exchanges. The NYSE trading floor is located at 11 Wall Street and consists of four rooms used for trading facilitation. A fifth commercial floor, located at 30 Broad Street, closed in February 2007. The main building, located at 18 Broad Street, between the corners of Wall Street and Exchange Place, was designated a national historic landmark in 1978, as was the building at 11 Wall Street. Around 2,308 companies list their shares on the NYSE. The price of shares on the NYSE reached US\$14.242 trillion in global market capitalization. As of December 2011, all 30 companies in the Dow Jones Industrial Average and all 500 companies in the S&P 500 were listed on the NYSE, except Intel and Microsoft. Market cap or what is called market capitalization is a basic measure of the overall

aggregate market value of a company. The capitalization value (market cap) can be used as a comparison of one company with other companies which are certainly similar ((Cahyani & Karim, 2023). The country's stock market capitalization value is among the largest in the ASEAN region. Considering that the size of the share weight greatly influences the movement of the index, it is very natural that the rise and fall of shares with the stock code TLKM are of particular concern to investors. Please note, TLKM shares have a large contribution to the IHSG or in other words, if the other 560 shares remain constant (*ceteris paribus*) then the IHSG can strengthen slightly just because TLKM shares strengthen and vice versa.

2. RESEARCH METHODS

2.1 Conceptual Framework

The analysis model in this research is as follows:

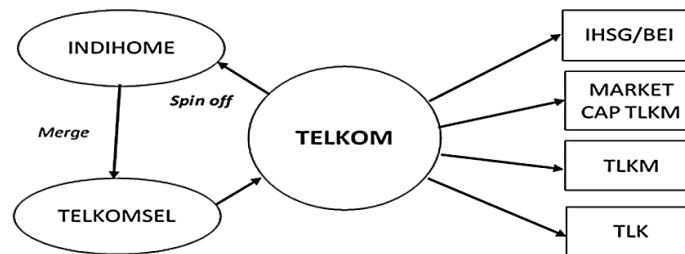


Figure 5. Conceptual Framework of Variable Relationships

The conceptual framework put forward in this research can describe the process of separating IndiHome from the parent company Telkom, then IndiHome joining the Telkomsel business (a Telkom subsidiary) like showed at Figure 5 of the process of spin off and merging. The effectiveness of this strategy can be seen from the company's performance before and after the spin-off process, that it is necessary to distribute each variable by assessing the correlation of each variable such as the movement of the IHSG, market cap, TLKM shares and TLK shares. After that, it can be seen how domestic investors react. or foreigners regarding the share movement, considering that Telkom is a public company that has been listed on two exchanges, namely the BEI and NYSE.

2.2 Hypothesis

The hypothesis proposed in this research can describe the process of separating IndiHome from the parent company Telkom, then IndiHome joining the Telkomsel business (a subsidiary of Telkom). How effective is this strategy if seen from the company's performance before and after the spin off process, that there is a need to evaluate each variable by assessing the correlation of each variable such as the movement of the IHSG, market cap, TLKM shares and TLK shares. After that, we can see how domestic investors react. or foreigners regarding the share movement, considering that Telkom is a public company that has been listed on two exchanges, namely the BEI and NYSE

2.3 Types of research

According to (Dewi & Suprajitno, 2021) that quantitative research can be interpreted as a research method based on the "philosophy of positivism", used to research certain populations or samples, collecting data using research instruments, quantitative or statistical data analysis, with the aim of testing hypotheses which has been set. The fundamental characteristic of this type of quantitative research is collecting relevant data and then conducting data processing and statistical analysis to test predetermined hypotheses. Then the results of the hypothesis test produce findings that can be formulated into conclusions and recommendations.

2.4 Sampling Technique

"Population is an area of generalization, objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn" (Sugiyono, 2014: 80). So the researcher takes a sample from the population which is the total number of objects or individuals to be studied using a nonprobability sampling or accidental sampling approach.

"In determining the sample size, researchers used the number of questions method, according to Husein" in (Wiyono & Wijaya, 2020). The method of asking questions to respondents to ensure the data taken is correct and relevant to the issues being researched. The data taken is based on periodic data.

2.5 Data collection technique

Data collection was carried out by collecting primary and secondary data. Primary data by collecting information from direct respondents via email or telephone. Meanwhile, secondary data is collected through existing information such as books, websites, magazines and journals.

2.6 Operational Definition of Variables and Their Measurement

1. Measurement results of variables that have a correlation between the IHSG and the TLKM share market cap, the movement of the TLKM share market cap can influence the IHSG movement
2. Measurement results of variables that have a correlation between IHSG and TLKM shares, movements in TLKM shares and IHSG influence each other
3. Measurement results of variables that have a correlation between TLKM shares and TLK shares, the movements of TLKM and TLK shares influence each other, even on different exchanges, namely BEI and NYSE

2.7 Data analysis technique

Data processing in research uses two tests. The first is a difference test to determine the difference in stock prices before and after the spin off using the independent t test if it is normal, but if it is not normally distributed using Mann Whitney. Then the second statistical test is a correlation test using Pearson if the data is normally distributed and Spearman if it is not normal. The normality test used is Kolmogorov Smirnov.

3. RESULTS AND DISCUSSION

3.1 Description of Research Data

Table 1. Description of Research Data Before and After Spin Off

Variable	Spin.Off	Median	Range
Market.Cap	After	371,978,623,333,000	(338,792,780,772,000 - 396,248,866,400,000)
	Before	402,192,599,396,000	(384,361,400,408,000 - 435,873,753,040,000)
Close Price TLK	After	24.285	(21.74 - 26.42)
	Before	27.27	(25.35 - 29.57)
Close Price TLKM	After	3755	(3420 - 4000)
	Before	4060	(3880 - 4400)
IHSG	After	6899	(6697 - 7017)
	Before	6756	(6566 - 6945)

Descriptive calculation results in table 1 are displayed in the form of median and range values (minimum and maximum). Median and range calculations are used for data that is not normally distributed. The calculation results can be seen both in the market cap, TLK share price, TLKM share price and IHSG which have a median value and range that is greater before the spin off than after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome with Telkomsel. In other words, there was a decline in the share prices of TLK, TLKM after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome into Telkomsel. Likewise, there was a decline in the market cap of TLKM and IHSG, and this was followed by a decline in TLK shares on the New York Stock Exchange following the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome with Telkomsel.

3.2 Hypothesis Testing Analysis

3.2.1 Normality test

Before testing the hypothesis, a data normality test was carried out on the data before and after both the close price TLK, TLKM, market capitalization and IHSG.

Table 2. Normality Test Results

Variable	Spin Off	Kolmogorov Smirnov	Sig.
Close price TLK	After	0.200	0.000
	Before	0.050	0.200
Close price TLKM	After	0.130	0.001
	Before	0.116	0.020
Market Capitalization	After	0.130	0.001
	Before	0.116	0.020
IHSG	After	0.116	0.008
	Before	0.074	0.200

The results of the normality test in table 2 show that there are two data that are normally distributed, namely the close price of TLK before the spin off and IHSG before the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome with Telkomsel. Apart from these two data, the data is not normally distributed. However, for the difference test, the normality requirements must be on the data before and after. So if there is something that is not normal then a non-parametric test is carried out.

3.2.2 Different Test Before and After Spin Off

Because the data was not normally distributed, the test was carried out using the Mann Whitney test. The complete test results are as follows:

Table 3. Different Test Before and After Spin Off

Variable	Spin.Off	Median	Range	Significance
Market.Cap	After	371,978,623,333,000	(338,792,780,772,000 - 396,248,866,400,000)	0,000
	Before	402,192,599,396,000	(384,361,400,408,000 - 435,873,753,040,000)	
Close Price TLK	After	24.285	(21.74 - 26.42)	0,000
	Before	27.27	(25.35 - 29.57)	
Close Price TLKM	After	3755	(3420 - 4000)	0,000
	Before	4060	(3880 - 4400)	
IHSG	After	6899	(6697 - 7017)	0,000
	Before	6756	(6566 - 6945)	

Based on the results of descriptive calculations in table 3, the results showed that the median and range before the spin off were higher than after. Then, to confirm this difference, a test was carried out and obtained good results on the market cap, TLK share price, TLKM share price and IHSG, all of which had a Mann Whitney test significance level of 0.000. This means a significant difference between the market cap, TLK share price, TLKM share price and IHSG before and after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome into Telkomsel. In other words, it is proven that there has been a significant decline in the market cap, TLK share price, TLKM share price and IHSG spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome with Telkomsel.

3.2.3 Test the Relationship between TLK and TLKM Share Prices Before and After the Spin Off

Next, a relationship test was carried out between TLK and TLKM share prices before and after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome into Telkomsel, using the Spearman correlation test because the data was not normally distributed.

Table 4. TLK and TLKM Share Price Correlation Test

Condition	Relationship Test	Correlation Test	Significance
After Spin Off	Close price TLK ↔ TLKM	0,831***	0,000
Before Spin Off	Close price TLK ↔ TLKM	0,893***	0,000

The results of the test of the relationship between TLK and TLKM share prices after the spin off of Indihome from PT Telkom Indonesia (Persero) in table 4 obtained a correlation value of 0.831 with a significance level of 0.000. Which means there is a very high significant relationship (more than 0.8) between TLK and TLKM shares after the spin off. Likewise, the results of the test of the relationship between TLK and TLKM share prices before the spin off of Indihome from PT Telkom Indonesia (Persero) showed a correlation value of 0.893 with a significance level of 0.000. Which means there is a very high significant relationship (more than 0.8) between TLK and TLKM shares before the spin off.

However, from the correlation value it can be seen that there was a decrease in the correlation value after the spin off from 0.893 to 0.831.

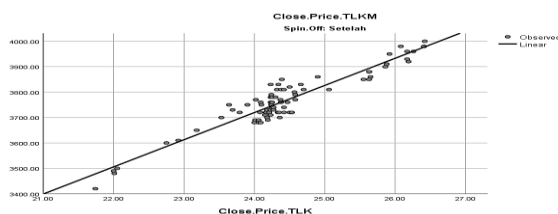


Figure 6.
Correlation of TLK and TLKM shares
after spinoff

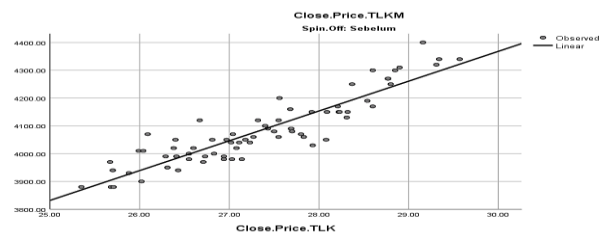


Figure 7.
Correlation of TLK and TLKM shares
Before spin off

3.2.4 Test the Relationship between IHSG and TLKM Before and After Spin Off

The following is a test of the relationship between the IHSG and the TLKM share price before and after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome into Telkomsel, with the Spearman correlation test because the data is not normally distributed.

Table 5. Correlation Test of IHSG and TLKM Share Prices

Condition	Relationship Test	Correlation Test	Significance
After Spin Off	IHSG ↔ Close Price TLKM	-0,050	0,656
Before Spin Off	IHSG ↔ Close Price TLKM	0,341**	0,004

The results of the relationship test between IHSG and TLKM after the spin off of Indihome from PT Telkom Indonesia (Persero) in table 5 obtained a correlation value of -0.050 with a significance level of 0.656. Which means there is no significant relationship between IHSG and TLKM after the spin off. The negative sign shows the opposite direction, IHSG increased, TLKM shares decreased although not significantly. However, the results of the relationship test between IHSG and TLKM before the spin off of Indihome from PT Telkom Indonesia (Persero) obtained a correlation value of 0.341 with a significance level of 0.004. Which means there is a low significant relationship (0.2 – 0.4) between IHSG and TLKM before the spin off.

However, from the correlation value it can be seen that there was a decrease in the correlation value after the spin off from 0.341 to 0.050.

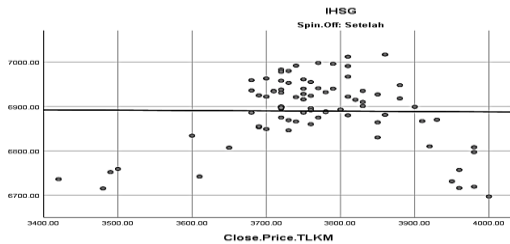


Figure 8.

Correlation of IHSG and TLKM share prices after spinoff

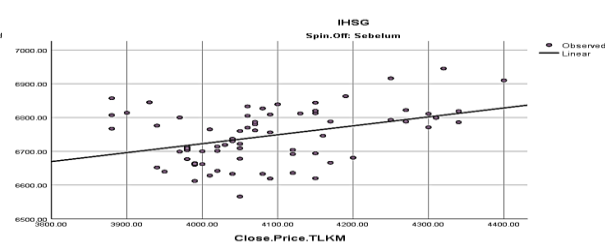


Figure 9.

Correlation of IHSG and TLKM share prices Before spin off

3.2.5 Test the Relationship between Market Capitalization and IHSG Before and After the Spin Off

The following is a test of the relationship between the IHSG and the TLKM share price before and after the spin off of Indihome from PT Telkom Indonesia (Persero) and the merger of Indihome into Telkomsel, with the Spearman correlation test because the data is not normally distributed.

Table 6. Correlation Test of Market Cap and TLKM Share Price

Condition	Relationship Test	Correlation Test	Significance
After Spin Off	Market Cap ↔ Close Price TLKM	-0,050	0,656
Before Spin Off	IHSG ↔ Close Price TLKM	0,341**	0,004

The results of the test of the relationship between market cap and TLKM after the spin off of Indihome from PT Telkom Indonesia (Persero) in table 6 obtained a correlation value of -0.050 with a significance level of 0.656. Which means there is no significant relationship between market cap and TLKM after the spin off. The negative sign shows the opposite direction, market cap increases, TLKM shares decrease, although not significantly. However, the results of the test of the relationship between market cap and TLKM before the spin off of Indihome from PT Telkom Indonesia (Persero) obtained a correlation value of 0.341 with a significance level of 0.004. Which means there is a low significant relationship (0.2 – 0.4) between market cap and TLKM before the spin off.

However, from the correlation value it can be seen that there was a decrease in the correlation value after the spin off from the original 0.341 to 0.050.

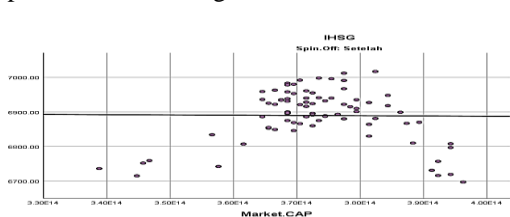


Figure 10.

Correlation of market cap and TLKM share price after spin off

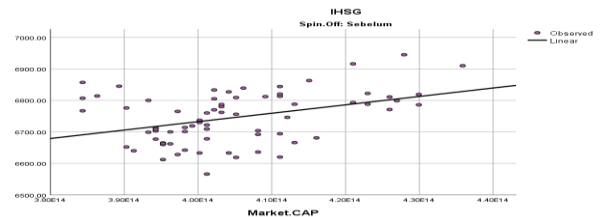


Figure 11.

Correlation of market cap and TLKM share price before spin off

4. CONCLUSION

Based on the results of data processing and research analysis, after the spin off process was completed there was a significant decline in the results of measurement tests for the four variables, namely Market Cap, IHSG, TLKM shares and TLK shares. This shows that not all management decisions have a positive impact, can be seen from the response

of local and foreign stock investors to the existing sentiment, referring to the assumption that Indihome joining Telkomsel does not necessarily mean that Singtel's ownership in Telkomsel will disappear even if dilution occurs. Apart from that, Indihome has a large contribution to Telkom, thereby affecting Telkom's revenue in the near future. Although the long-term target of reducing opex and capex can be realized. The recommendation from the results of this research are several things that need to be considered, related to decisions taken by stakeholders for several parties involved, such as for the government to negotiate with Singtel to increase Telkom's ownership in Telkomsel, so that the foreign portion can be reduced or even eliminated, There are many terms that state "being a host in your own country". Telkom Management as a stakeholder in the company can take a more prudent policy in the future. Meanwhile, for stock investors, both local and foreign, it is a guide to buying TLKM or TLK shares when the position is oversold, considering that the Telkom company is a company owned by the Indonesian government, it is still relatively safe.

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