

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Languages**



## **Bachelor Thesis**

**Types of investments and investment strategies**

**Irshod Zamirov**

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# **BACHELOR THESIS ASSIGNMENT**

Irshod Zamirov

Economics and Management

Thesis title

**Types of investments and investment strategies**

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## **Objectives of thesis**

The main aim of the bachelor thesis is to determine the types of investments and investment strategies as well as the role of investments in economy.

## **Methodology**

The work consists of two parts – theoretical and practical. The theoretical part will be based on the study of secondary sources. The empirical part will be compiled on the basis of outputs from quantitative/qualitative research.

## The proposed extent of the thesis

30 – 40 pages

## Keywords

Investment, investment goals, investment risks, forecasting, cryptocurrency, stocks, bonds, economy, market

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## Recommended information sources

C Bogle J. Common Sense on Mutual Funds Fully Updated 10th Anniversary Edition. 2010. ISBN 978-0-470-13813-7.

Lewis A. The basics of bitcoins and blockchains: an introduction to cryptocurrencies and the technology that powers them. Mango Media Inc., 2018. ISBN 978-1-63353-801-6.

LUKE, Jeff. *Stock market intelligence : investing made easy*. [New York]: Amazon, 2019. ISBN 978-1976928345.

MALKIEL, Burton Gordon. *A random walk down Wall Street : the time-tested strategy for successful investing*. New York: W.W. Norton & Company, 2016. ISBN 978-0-393-35224-5.

Richards C. *The behavior gap: Simple ways to stop doing dumb things with money*. Penguin, 2012. ISBN: 978-1-591-84464-8.

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## **Declaration**

I declare that I have worked on my bachelor thesis titled "Types of investments and investment strategies" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15.03.2024

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## **Acknowledgement**

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# **Types of investments and investment strategies**

## **Abstract**

The thesis focuses on the categorization of investments, types of investments, and their strategies, which are essential to comprehend their function in a country's economic growth. Also, the concept of the thesis centers on investors' portfolio investments. To fully comprehend and appreciate the idea of the investment market, it also considers several essential concepts and examines methods to study the structure of the investment market and the processes governing its operation. It consisted of a form of comparative analysis that was used to assess various aspects of cryptocurrencies and other types of investments and their regulation mechanisms.

**Keywords:** Investment, investment goals, investment risks, forecasting, cryptocurrency, stocks, bonds, economy, market, money.

# Druhy investic a investičních strategií

## Abstrakt

Práce se zaměřuje na kategorizaci investic, typy investic a jejich strategie, které jsou nezbytné pro pochopení jejich funkce v ekonomickém růstu země. Koncept práce se také soustředí na portfoliové investice investorů. Aby myšlenka investičního trhu byla plně pochopena a oceněna, práce zvažuje také několik základních konceptů a zkoumá metody studia struktury investičního trhu a procesů, kterými se řídí jeho fungování. Metody se skládaly z formy srovnávací analýzy, která byla použita k posouzení různých aspektů kryptoměn a dalších typů investic a jejich regulačních mechanismů.

**Klíčová slova:** Investice, investiční cíle, investiční rizika, prognózy, kryptoměna, akcie, dluhopisy, ekonomika, trh, peníze.

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## **1. Introduction**

The principles of investing are frequently believed to not have been changed for hundreds of years by people discussing investment. It is accurate if the phrase "buy cheap and sell expensive" is used, but investing has been changed in all other senses. The issue of investing is considered crucial in today's society.

The contemporary economy is permeated by investment processes, which guarantee any state's progress. Growth in production volumes and the creation of new types of activities are both unachievable without the participation of investments in the processes of establishing the material and technological foundation of businesses and organizations. Additionally, actual investments that go straight to production facilities and support their expansion and modernization are what have the most impact on the growth of a certain sector of the economy. This type of investment is more difficult and expensive for the investor since it necessitates more work on his part to assess the viability of the proposed investment project.

Although inflation is not influenced by us, our assets can be safeguarded against it. Investment is pursued by people with the aim of growing their money; that is the purpose for which people invest. It is widely known that individuals used to keep their money hidden in locations such as under mattresses or other secret hiding spots for safekeeping, and the belief that investing is the same is mistakenly held by many people. The primary distinctions are that investing entails taking risks by putting money in a variety of investment instruments in order to earn income, as opposed to saving, which aims to leave money unspent. People invest for a variety of reasons, but the desire for more money to assure a comfortable old age is the most significant. Our future purchasing power is determined by our existing investments. Negative returns and reduced buying power in the future can be caused by failures in our current investments. Two options for how to spend your money exist: it can either be spent immediately or saved and invested.

## **2. Objectives and Methodology**

### **2.1. Objectives**

The main aim of the bachelor thesis is to determine the types of investments and investment strategies as well as the role of investments in the economy.

Along with the main objective, it is also important to cover the background of investment types, explain the fundamentals of how mutual funds, stocks, and other types of investments work, and provide an overview of the various strategies that managers employ to increase profits from one year to the next. It is also important to cover the variety of investment funds and their strategies, as well as to compare how those types of investments perform in various market conditions.

### **2.2. Methodology**

The work consists of two parts - theoretical and practical.

The theoretical part presents the characteristics of different types of investments, what the essential differences and strategies are. Also an overview of different and mostly used investment strategies, and different market conditions. It is based on the analysis of information and data from secondary sources in various professional databases, such as scientific publications, scientific articles, and literature, as well as relevant internet resources devoted to investment strategies, financial markets, investments, cryptocurrency, and other topics. It contains information on investments and types of investments, their growth, and a thorough look at modern techniques of investing with a profit.

The empirical part is compiled on the basis of outputs from quantitative/qualitative research. The success of various investing strategies is examined using analysis and interpretation of data, providing empirical proof of their efficacy and applicability in diverse market environments comparing their returns, risk profiles, and other specific criteria.

### **3. Theoretical part**

#### **3.1. What is investment and why do people invest**

Investing is the process of allocating finances or capital to purchase assets with the expectation of making a profit or enjoying capital growth. Investments come in a wide variety of shapes and sizes, each with unique characteristics, dangers, and potential rewards, such as stocks, bonds, mutual funds, real estate, commodities, cryptocurrencies, and NFT, among others. The goal of investing is to gradually build your money. Obtaining a return on investment in the form of dividends, interest, or rent is one way to achieve this. Another is to sell an investment for a profit. Investing involves some risk since the value of the investment might vary and there is always a chance that money could be lost. Yet if you diversify your holdings and consider the long term, these risks could be reduced. For a variety of reasons, including the following, people invest in a wide range of assets, such as stocks, bonds, real estate, and commodities (Graham Benjamin, 2016).

**Increasing their fortune:** One of the main goals of investing is to build wealth over time by taking advantage of the possibility of capital growth and/or consistent income through dividends or rental income.

**To spread out their holdings:** Given that the performance of various assets can change independently of one another, diversifying investments across several asset classes can help lower the overall risk of a portfolio of investments. (Graham Benjamin, 2016)

**To prepare for the future:** Making investments can assist people in creating a nest egg to meet their financial demands, such as retirement or college costs, in the future.

Investing in assets that consistently generate income, such as rental properties or dividend-paying equities, can aid in the generation of passive income, which can be used to augment a person's normal income.

#### **3.2. Traditional investments**

A category of assets known as "traditional investments" has been extensively employed for ages to provide income and amass wealth. Compared to other investments, these



investments are thought to be reasonably steady and low-risk. Traditional investments that are among the most popular include stocks, bonds, mutual funds, and real estate.

Stocks are ownership interests in a corporation and can provide investors potential capital growth as well as dividend income. Although they are among the riskiest conventional investments, they nevertheless offer a high return potential. It's crucial to take the company's management, market position, and financial health into account when making stock investments.

Bonds are debt instruments that the investor uses to lend money to the issuer. They can act as a hedge against inflation and offer a stable income stream in the form of interest payments. For investors seeking for a more conservative investment approach, investing in bonds is often regarded as being less risky than investing in stocks (Eugene Fama F., 1993). Yet, it is crucial to take into account elements like the issuer's creditworthiness, the bond's maturity, and the state of interest rates.

Mutual funds are portfolios of stocks, bonds, or other assets that are expertly managed. They provide investors the chance to combine their funds to invest in a diversified portfolio that gives them exposure to a range of assets (G. R. Jensen, 2019). For individuals seeking for a more hands-off approach to investing, mutual funds can provide a quick and affordable alternative to enter the stock and bond markets.

Another well-liked conventional investment that has the potential for long-term development and income through rentals is real estate. Real estate investing entails the acquisition, administration, and upkeep of properties, making it a more hands-on endeavour. Since they reflect ownership in a portfolio of properties and generate income through dividends, real estate investment trusts (REITs) provide a more passive approach to invest in real estate.

Compared to other investments known as alternative investments (such as commodities, ETFs, or cryptocurrencies), these are believed to be relatively stable and low-risk. Due to their stability and minimal risk, traditional assets have withstood the test of time and continue to be favoured by investors.

### **3.2.1. Stock investment: A story of innovation and growth**

The Dutch East India Company first issued shares in Amsterdam during the 1600s in order to obtain money for trading missions. For the first time, a corporation offered shares to the general public, enabling anyone to own a stake in the business and partake in its earnings. The business became the first to trade openly. The founding of the Amsterdam Stock Exchange in 1720 introduced the idea of stock markets as known today. The London Stock Exchange and the New York Stock Exchange, both of which were founded in 1773 and 1792, respectively, were the next stock exchanges to be established (Ferguson, 2008). This paved the way for the growth of stock markets, which over time transformed into the intricate, worldwide financial systems we witness today.

Following then, additional exchanges opened and new financial instruments were developed, and stock markets continued to expand and alter. Technology and communication developments during the 20th century changed the stock market and made it simpler for investors to acquire information and purchase and sell equities. The business has undergone significant change as a result of the development of computers and the Internet, which have made online stock trading possible and increased stock investing accessibility for people all over the world (Ferguson, 2008).

**Trading via the Telegraph and Telephone:** The development of the telegraph and telephone in the late 19th and early 20th centuries changed communication and facilitated stock trading for brokers and traders. As a result, trading became quicker and more effective, which aided in the stock market's expansion.

**Computers and electronic trading:** The late 20th century saw a transformation in the stock market as a result of the widespread use of computers and electronic trading, which made it simpler for investors to acquire information and place transactions. This made it feasible to handle bigger portfolios and enabled for faster, more accurate trading.

**Online Trading:** The late 20th century arrival of the Internet and the early 21st century expansion of online trading platforms have increased accessibility to stock investment for people all over the world. Online brokers make trading simple and affordable, and the Internet gives users access to a variety of data on businesses and the stock market.

**Exchange-Traded Funds (ETFs):** Since its 1993 debut, ETFs have grown to be a well-liked investing choice, providing investors with an opportunity to participate in a diverse portfolio of equities.

ETFs make it simple for investors to invest in a variety of equities with a single transaction since they are made to mimic the performance of a specific market index, industry, or asset class.

**Algorithmic Trading:** In recent years, the stock market has seen an increase in the usage of sophisticated algorithms, which are used to execute transactions based on pre-determined criteria. This makes trading more effective and accurate and can lessen the influence of human mistake and emotions on trading decisions (Ferguson, 2008).

**Artificial Intelligence and Machine Learning:** Although this area of research is still in its infancy, it has already showed promise in terms of assisting investors in making better investment choices. AI and machine learning have the ability to provide investors a competitive edge by analyzing massive volumes of data to spot trends and forecast future market performance.

The stock market has been a significant contributor to economic expansion by giving people and businesses a way to raise cash and increase their wealth. Although investing in stocks involves risk due to the possibility of market and individual stock value fluctuations, it is still a common alternative for people looking to accumulate wealth over the long term (Eugene Fama F., 1993).

With billions of dollars changing hands every day, stock markets now are an essential part of the world financial system. With investing options ranging from individual stocks to exchange-traded funds (ETFs) and other sophisticated financial instruments, stocks have emerged as a popular choice for both individuals and institutions (Graham Benjamin, 2016).

Prior to making any investment decisions, it's crucial to conduct extensive research, take one's investment goals and risk tolerance into consideration, and keep in mind that while investing in stocks might present potential for development and wealth creation, it also carries a certain amount of risk.

### **3.2.2. Stock conception and characteristics**

Equities, usually referred to as stocks, are financial instruments that reflect ownership in a corporation. They offer people a claim on a share of a company's revenues and a voice in how it runs by granting them the ability to vote on certain issues.

On stock exchanges like the New York Stock Exchange (NYSE) and the NASDAQ, stocks may be purchased and sold.

A stock's worth is established by the market, and the price reflects how highly the public believes in the firm and its prospects for the future. Its value may change depending on a number of variables, including as the state of the economy, the success of the firm, and investor mood.

The possibility for capital growth, dividend income, and portfolio diversity are just a few advantages of investing in stocks. It's critical to realize that stock investment is risky since both the value of individual stocks and the stock market as a whole may fluctuate.

Stocks come in a variety of forms, such as ordinary and preferred stock. Preferred stocks receive precedence in terms of dividends and asset claims in the case of a firm's dissolution, whereas common stocks provide investors an ownership position in a corporation and certain voting rights (Bogle, 2017).

It's vital to think about things like the company's financial health, the stability of its sector, and its potential for future development when thinking about investing in stocks. Also, it is a good idea to diversify your investments across a number of businesses and industries and to have a long-term investing perspective.

The efficient market hypothesis, which contends that stock prices effectively represent all relevant information and that it is challenging to continuously outperform the market by individual stock selection, is one of the basic theoretical pillars of stock investment. This theory's proponents contend that investing in a variety of equities is preferable to trying to identify specific winners (Malkiel, 2003).

The idea of risk and return is a crucial theoretical idea in stock investing. The fundamental tenet is that higher levels of risk entail larger potential profits. As a result, while investing in stocks, it's crucial to take the risk-return trade-off into account. This may be achieved by spreading investments over a variety of stocks and sectors, as well as by taking into account elements like a company's financial soundness and the stability of its industry (Malkiel, 2003).

While making stock investments, it's crucial to take behavioural finance theories into account. This area of research looks at how psychological elements like emotions and biases might affect investing choices. By being aware of these cognitive biases, people may make better financial choices and steer clear of frequent blunders like overreacting to short-term market fluctuations or following the crowd.

Stock investing is a challenging and dynamic process that requires taking into account a number of theoretical ideas, including the efficient market hypothesis, risk and reward, and behavioural finance. Individuals can possibly profit from the growth of stocks and the receiving of dividends by adopting a well-informed and diversified strategy, while controlling the risks involved (Bogle, 2017). When choosing certain stocks to invest in, it is crucial to understand the dangers and advantages of stock investing as well as to take into account a number of different aspects.

Throughout time, investing in stocks has gained popularity, especially among individual investors. This can be ascribed to several things, such as:

A greater understanding of the advantages of stock investment has emerged as a result of the development of the internet and digital communication. People may now acquire stock market information more easily and make wise investing selections as a result.

**Economic Development:** Many people have looked to the stock market as a method to increase their wealth as economies have expanded and become more stable. This has raised investment levels and increased demand for equities.

**Low-Cost Access:** The ability to invest in stocks has become simpler and more accessible to people thanks to technological advancements. People may now trade stocks from the comfort of their own homes thanks to online brokerages, and many have also lowered their costs and charges to make it more affordable for a wider variety of investors (G. R. Jensen, 2019).

**Population Aging:** As the population ages and more individuals approach retirement, they are turning more and more to the stock market as a means of generating extra income and protecting their money.

These are just a few of the elements that have helped make stock investment more and more popular. Although there is no assurance of success in the stock market, many individuals view investing as a means of accumulating money over the long term and achieving their financial objectives.

These are a few important stock qualities that buyers should think about before making a purchase.

**Possibility for Capital Appreciation:** The potential for capital appreciation is one of the key advantages of stocks. This indicates that as the firm develops and rises in value, the value of your investment may rise over time. Investors may see tremendous long-term growth potential as a result (Graham, 1934).

**Income from Dividends:** Stocks can give investors income in the form of dividends in addition to capital growth. Dividends, which are payments provided to shareholders from a company's profits, can offer investors a steady stream of income.

**Risk:** Due to the fact that a number of variables, including market circumstances, corporate performance, and economic conditions, can have an impact on the value of stocks, they are one of the riskiest traditional investments. While one of the main selling points for stocks is their potential for huge profits, it's crucial to keep in mind that they also carry the risk of suffering substantial losses (Graham, 1934).

**Market Liquidity:** The ease with which equities may be purchased and sold on the market is referred to as their market liquidity. The high liquidity of established firms' stocks makes them simpler to acquire and sell. These companies often have big market capitalizations. Stocks of smaller firms or those with a low trading volume, on the other hand, could be less liquid and more difficult to sell.

**Business Financials:** It's essential to take the company's financial situation into account while investing in stocks. The value of a stock may be impacted by a number of variables, including revenue growth, profitability, and debt levels, all of which should be regularly watched.

**Market Trends:** The value of stocks can be impacted by market trends such as interest rates and general economic health. For instance, increasing interest rates may result in lower consumer spending, which may have a detrimental effect on business profitability and stock values.

### **3.2.3. Pros and Cons of investing in stocks**

Benefits of stock investing:

**Possibility for big returns:** Long-term stock investments offer a significant return potential, particularly when made in reputable businesses with a solid track record of expansion. Investment portfolio diversification can assist to lower the risk of investing in a particular business or sector by purchasing a number of companies.

Equities are very liquid, making it simple to purchase and sell them on stock markets.

Possibility for passive income: A source of passive income comes from the dividends that many businesses give to their shareholders.

Cons of stock investment:

Market risk: Stock prices may fluctuate as a consequence of changes in economic and market conditions, which exposes stocks to market risk.

Risk associated with the specific firm, such as the possibility of bankruptcy, subpar financial performance, or other business difficulties, is assumed when investing in individual stocks.

Stock prices can see considerable short-term variations due to the short-term volatility of stocks.

Knowledge needed: Stock investing may be challenging and requires a solid grasp of financial statements, business performance, and market dynamics.

### **3.3. The evolution of bonds**

Bonds, usually referred to as fixed-income securities, are a kind of financial instrument that act as a proxy for a loan that an investor makes to the issuer, which might be a business or the government. By issuing bonds, which have been used to generate money for millennia, the issuer makes a pledge to pay periodic interest payments (coupons) and to return the bond's face value (principal) when it matures. Bonds have a long history and were first used to fund important public works projects like roads, aqueducts, and temples in ancient civilizations. The usage of bonds has changed through time, responding to the shifting political and economic landscape and turning into a crucial instrument for organizations, businesses, and investors.

#### Origins of Bonds in the Past

Bonds have existed from the time of the ancient civilizations of Babylon, Greece, and Rome. Large public works projects were financed in these societies via bonds. These bonds, which were often issued by the government, included a guarantee to pay back the debt over a certain length of time along with interest. Roads, aqueducts, and other infrastructure projects that were too big for private individuals to finance on their own were built using this early type of bonding.

#### Ancient Europe

The usage of bonds persisted throughout the Middle Ages in Europe, when they were employed to fund wars and other significant undertakings.

Cities, kingdoms, and religious organizations all issued bonds at this period. The city of Genoa issued bonds to finance its conflicts with other city-states in the 13th century, which is one of the earliest instances of bonds being used in Europe.

These bonds were frequently traded and turned into a well-liked kind of investment for affluent people since they pledged to return the loan with interest.

#### Modern era and Industrial Revolution

An important turning point in the development of bonds occurred during the Industrial Revolution in the 18th and 19th centuries. Bonds became a popular source of funding for businesses and nations as they started to industrialize. Bonds were a popular way for governments to raise money for wars and other massive undertakings. Bonds became an increasingly crucial tool for obtaining capital as the stock market and other financial institutions grew and made it simpler to issue and sell them (S. HOMER, 1996).

The usage of bonds as a financial tool developed further in the 20th century. Bond purchases and sales have become simpler because to the advancement of new technology like computers and the internet, and the globalization of financial markets has made it easy for investors to purchase bonds from corporations and governments all over the world. With the global bond market being projected to be worth billions of dollars, bonds currently play a crucial part in the global financial system (Teall, 2022).

#### Different Bonds

Bonds have been used for a variety of reasons throughout history and have been issued in a variety of forms. Government bonds, municipal bonds, corporate bonds, and Treasury bonds are a few of the most popular kinds of bonds. Municipal bonds are issued by local governments to fund infrastructure projects and other public works, whereas government bonds are issued by national governments to fund its operations. Although the U.S. government issues Treasury bonds to support its operations, corporations issue corporate bonds to raise cash.

**Bonds and Investments** Due to their steady income stream and moderate degree of risk, bonds have long been a popular kind of investment.



Bonds offer a set rate of return, in contrast to stocks, which are impacted by changes in the stock market, making them a popular option for investors seeking consistency and stability in their investments (Veronesi, 2010).

Bonds are a significant part of many financial portfolios today, and people, businesses, and governments use them to raise money and fund their activities.

Economic, political, and technical changes over the ages have influenced the development of ties. Bonds have been essential to the growth of the world financial system from their inception in ancient civilizations to their usage today as a mechanism for funding large-scale enterprises.

Bonds are a common kind of investment in the contemporary period, giving people, organizations, and governments a steady and regular source of income. The development of new technology has made it simpler to purchase and sell bonds, thus fostering their expansion and evolution. The globalization of financial markets has made it feasible for investors to buy and sell bonds from all over the world (Veronesi, 2010).

A discounted cash flow model, which considers the current value of the future cash flows (coupons and principal) that the bond will produce, is frequently used to price bonds. This model may be formally represented as follows:

$$PV_{\text{bond}} = \text{Coupon payment per period} / (1+i)^1 + \text{Coupon payment per period} / (1+i)^2 + \dots + \text{Coupon payment per period} / (1+i)^n$$

$i$  = market discount rate

Bonds' future is still unknown, but it is obvious that they will always be important in the financial world. The usage of bonds will continue to adapt and alter, supporting economic growth and development all around the world as economies expand and evolve and new technologies are developed.

Bonds have a long and intriguing history that traces the development of financial instruments from their early inceptions to their current application in the global financial system. Bonds will probably continue to be a major factor in the financial world for many years to come, whether they are used for financing or investing.

### **3.3.1. Bonds conception and characteristics**

Bonds are a popular choice for investors for a number of reasons, including their relative stability when compared to other investment options like equities. Due to the issuer's commitment to regular interest payments and the repayment of the bond's principal at maturity, bonds are viewed as less risky investments (G. R. Jensen, 2019). By doing this, bondholders get a steady stream of income and their portfolio's overall volatility is decreased.

Bonds are frequently used to balance portfolios as well. Investors own both bonds and equities in order to attain a combination of income and growth. This diversity contributes to lower overall portfolio risk and longer-term investment returns that are more reliable.

Due to their importance as a major source of funding for governments and enterprises, bonds also play a significant role in the global financial system. The most economical way to raise cash is often via issuing bonds, and because of the scale of the bond market, issuers have access to a sizable investor pool (G. R. Jensen, 2019).

Bonds provide investors with a useful tool for diversifying their portfolios and reaching their financial goals because of their stability and predictability.

The bond market, however, is known to fluctuate and alter over time, reflecting changes in the broader economy and the financial environment.

Bond demand often declines during times of economic expansion and stability as investors go to riskier products like equities for better yields. In contrast, as investors look for the stability and predictability provided by fixed-income instruments, the demand for bonds tends to rise during times of uncertainty and economic collapse. (Veronesi, 2010)

The popularity of bonds as an investment is significantly influenced by interest rates. Bond yields lose appeal when interest rates are low, which prompts investors to look for alternate assets. The yield on bonds, on the other hand, becomes more desirable when interest rates are high, increasing demand.

It is crucial to keep in mind that these patterns are general findings and could not apply in all circumstances. Changes in tax laws, governmental regulations, and world events are just a few more variables that may have an impact on how popular bond investment is.

In order to make wise investment decisions, it is crucial for investors to keep educated and current on the most recent economic and financial developments.

The following are some important aspects of bonds that buyers should think about before making a purchase.

Bonds offer a stable income stream in the form of interest payments, which is one of its key advantages. The amount of these payments, which are normally payable semi-annually, is decided at the time the bond is issued (Veronesi, 2010). For investors looking for a more cautious investing approach, this offers a dependable source of income.

**Reputation of the Issuer:** A key element in assessing the risk of a bond investment is the issuer's creditworthiness. Investors should think about things including the company's financial health, market position, and management while investing in bonds issued by businesses. Regarding government bonds, it's crucial to take the government's stability and capacity for debt repayment into account.

Bonds' maturities are measured in terms of the time before they reach their full face value. Longer-term bonds often have higher interest rates, but they also carry more interest rate risk. Bonds with shorter maturities, on the other hand, provide lower interest rates but are seen as safer investments (Veronesi, 2010).

**Interest Rates:** Interest rates are very important in deciding how much a bond is worth. Existing bonds often lose value as interest rates rise and vice versa. This is because current bonds with lower interest rates are less appealing to investors as new bonds are issued with greater interest rates.

**Market Liquidity:** The ease with which bonds may be purchased and sold on the market is referred to as their market liquidity. Certain bonds may be less liquid and more difficult to sell on the market, especially those issued by smaller corporations or those with longer maturities.

Bonds, like other assets, are subject to the risk of inflation. Investors should take inflation into account since it reduces the buying power of interest payments from bonds.

### **3.3.2. Pros and cons of investing in bonds**

Pros:

**Income:** Bond investments offer a continuous source of income in the form of interest payments, which is one of its key benefits. These payments are often dependable and give investors a steady source of income.

Bonds are typically thought to be safer than equities in terms of risk. The danger of default is minimal if the issuer is a governmental body. While being greater, the default risk for corporate bonds is still lower than the risk related to stocks.

Bonds can help diversify assets and lower overall portfolio risk by being included in a portfolio. Investors may be able to lessen the effect of market volatility on their portfolio by investing a combination of stocks and bonds.

**Returns that can be predicted:** Bond returns can often be predicted better than stock returns. A bond's interest rate is predetermined at the time of issue, thus unlike the price of a stock, a bond's price is less erratic.

Cons:

**Reduced returns:** Bond returns are often lower than stock returns. This is so because investors seek a lower rate of return on bonds since they are less risky than equities.

Bond value may be impacted by changes in interest rates due to interest rate risk. Bond values will decrease if interest rates increase and vice versa. Bondholders may suffer a loss of principal as a result of this.

**Credit risk:** By buying bonds, investors are constantly taking a chance that the issuer may go out of business. The bondholder could not get their entire investment back if the issuer defaults.

**Risk from inflation:** Inflation has the potential to reduce both the bond's face value and the buying power of interest payments. Over time, bondholders may experience a genuine loss of value as a result of this.

### **3.4. Evolution of mutual funds**

Since their beginnings more than a century ago, mutual funds have undergone tremendous change.

Mutual funds are financial instruments that combine the capital of many individuals to buy a portfolio of stocks, bonds, and other assets. Since their introduction in the late 19th century, they have been a well-liked investment option for both private investors and large institutions (Haslem, 2009). Due to its accessibility to expert investment management, diversification, and a variety of investment possibilities, mutual funds continue to be a well-liked investment choice for millions of people today.

**The Early Years:** In the Netherlands, in the late 19th century, the first mutual fund was created. At the time, it was a revolutionary notion to pool money from different individuals to buy securities, but it rapidly gained popularity in other nations. In 1924, the Massachusetts Investors Trust was launched, becoming the nation's first mutual fund. Formerly solely available to affluent individuals and organizations, this fund was established to give individual investors access to professional investment management (Haslem, 2009).

The availability of mutual funds increased dramatically during the ensuing decades as their popularity grew.

**The expansion of mutual funds:** Mutual funds expanded quickly during the post-World War II economic boom. Both new mutual funds and investments in current funds grew. Mutual funds had established themselves as a popular form of investing by the 1960s. With the emergence of actively managed funds, mutual funds continued to develop throughout the 1970s and 1980s. Professional investment managers were in charge of these funds, and they tried to outperform the market by employing a number of different investing methods (Haslem, 2009). Passive funds, on the other hand, just sought to follow the performance of a benchmark index. As investors sought strategies to outperform the market and generate greater returns, actively managed funds gained popularity, which grew for the remainder of the 20th century.

#### Introduction of Index Funds

With the introduction of index funds, the mutual fund industry underwent major upheaval in the 1990s and 2000s. By investing in the same equities that make up the benchmark index, such as the S&P 500, these funds sought to match the performance of the benchmark index. Investors began to recognize that actively managed funds struggled to regularly outperform the market, which led to the rise in popularity of index funds (Haslem, 2009). They provided diversity, minimal costs, and an easy investing plan.

The Modern Era: Mutual funds have developed and gained popularity in recent years. These days, a huge variety of asset classes and investing approaches are covered by dozens of different mutual funds. The emergence of exchange-traded funds has accelerated the evolution of the mutual fund industry (ETFs). In that they attempt to mimic the performance of a benchmark index, ETFs and index funds are comparable. Nevertheless, ETFs are exchanged like stocks on an exchange. As a result, investors have more freedom and may buy and sell ETFs at any time throughout the trading day. ETFs have grown in popularity in recent years, and each year, billions of dollars are invested in them.

### **3.4.1. Characteristics of mutual funds**

Mutual Funds' Operation:

Pool of Investments Learning about investment pools is the first step in comprehending mutual funds. Your money and the money of other investors are pooled when you invest in a mutual fund to buy a portfolio of assets. By buying a range of assets using this fund, diversification is achieved while risk is decreased.

Investment Manager: The mutual fund's investment manager is in charge of overseeing the investment pool. The fund's performance is decided by the management, who also decides which assets to acquire and sell. In an effort to maximize returns for investors, investment managers employ a range of tactics and methods.

Mutual Fund Net Asset Value (NAV): A mutual fund's net asset value (NAV) is calculated by deducting its obligations from the value of the fund's assets. The price at which shares of the fund are purchased and sold is determined by the NAV. It is determined at the conclusion of every trading day and is frequently stated as a value per share (G. R. Jensen, 2019).

The assets of mutual funds are held in trust for the benefit of its investors, and the funds are set up similarly to trusts. Professional investment managers are in charge of managing the portfolio of the fund as well as the day-to-day operations of the fund. Also, a range of investing strategies are used by mutual funds, including growth, value, and income.

Growth-oriented funds invest in businesses with high earnings potential and prioritize capital gains. Value funds make investments in undervalued businesses in an effort to increase their value. With the aim of giving investors a consistent income stream, income funds invest in bonds and other income-producing instruments (Haslem, 2009).

Investing in mutual funds has a number of significant advantages, including:

**Diversification:** The capacity to achieve diversity is one of the key advantages of investing in a mutual fund. A mutual fund can buy a range of assets by pooling money from several participants, which lowers the risk involved with investing in individual securities.

**Professional Management:** Professional investment managers who have the knowledge and experience necessary to make wise investment decisions oversee mutual funds. Investors who do not have the time or skill to manage their own portfolios might benefit from this peace of mind.

**Convenience:** For those who do not have the time or expertise to manage their own portfolios, investing in mutual funds is a handy choice. Individuals can access a diversified range of assets by investing in mutual funds without having to study and buy individual stocks themselves.

Mutual funds provide access to a wide variety of investment alternatives, including stocks, bonds, and other instruments. This allows for greater flexibility and customization of portfolios by enabling investors to participate in a wide range of asset classes and investing types.

Mutual funds have a high level of liquidity, enabling investors to quickly purchase and sell shares in a fund without paying a hefty transaction fee. For investors who might need to access their money quickly, this might be a huge benefit (Haslem, 2009).

**Cost Effectiveness:** Compared to buying individual shares, investment in a mutual fund may be less expensive. Mutual funds aggregate money from several participants, which allows the fund's management costs to be spread out and lower the overall cost for each individual investment.

### **3.4.2. Pros and cons of investing in mutual funds**

Pros:

**Diversification:** One of the main benefits of mutual funds is that they provide diversity over a range of different assets and industries, which lowers the risk involved with investing in individual stocks or bonds.

**Professional management:** Professional fund managers who have the knowledge and resources to make investment decisions manage mutual funds, which eliminates the requirement for individual investors to have in-depth knowledge of the stock market or certain sectors.

**Accessibility:** A wide spectrum of people can invest in mutual funds because many of them have modest minimum investment requirements.

**Convenience:** Due to the availability of many mutual funds through brokerage companies and internet platforms, investing in mutual funds is often simple and straightforward.

**Cons:**

**Costs and fees:** The fees and expenditures incurred by the mutual fund are one of its main disadvantages. Your investment returns may be negatively impacted by these costs.

**Lack of control:** As a mutual fund investor, you have little influence over the particular investments that the fund management makes. For investors who like to have greater influence over their investing portfolios, this may be a drawback.

**Performance risk:** Market circumstances and the performance of the underlying securities owned by the fund might have an impact on the performance of mutual funds.

**Complexity:** Due to the complexity of some mutual funds, which may contain a wide range of various assets and investing techniques, it can be challenging for individual investors to comprehend the risks and possible returns related to the fund.

### **3.5. Real Estate investing**

The origins of real estate investing may be seen in early civilizations, when affluent persons would buy land and other types of real estate to protect their money and elevate their social standing. Real estate investing has changed throughout the years, adjusting to changing economic and social circumstances and generating new possibilities for investors. Here's a deeper look at some of the significant occurrences and changes that have impacted real estate investing history over time:

**Greece and Rome in antiquity:**



Wealthy individuals would invest in land and other real estate as a method to safeguard their riches and raise their social position as far back as the ancient civilizations of Greece and Rome. In medieval Europe, when real land was frequently used as collateral for loans, this practice persisted (S.H Chan, 2003).

Centuries of the 17th and 18th: The development of colonialism and mercantilism throughout the 17th and 18th centuries opened up new prospects for real estate investment.

As a result of the colonization of new lands and the establishment of new communities, housing and commercial real estate were in high demand. Investors started buying property close to these new constructions as companies and businesses started to pop up. This gave them the opportunity to benefit from the expansion of the industrial sector and the rise in land prices.

The United States saw a period of fast industrialization and economic expansion in the late 19th and early 20th centuries, which coincided with a boom in real estate investing. Real estate developers hurried to build new houses and communities to satisfy the rising housing demand brought about by the development of the middle class (S.H Chan, 2003). In order to take advantage of the increasing demand for transportation, speculators started buying land near the railroad as soon as it was built. As a result, towns and cities were created, and property was bought by investors to take advantage of the areas' expanding populations.

Real estate investment trusts (REITs) were first established in the 1960s, which is considered to be one of the most important periods in the history of real estate investing. Without having to make an actual property purchase, REITs provide investors access to the real estate market by allowing them to participate in a portfolio of real estate assets (S.H Chan, 2003).

1980s and 1990s: As a result of low mortgage rates and rising home demand, the real estate market grew quickly in the 1980s and 1990s. Early in the 1990s, a period of collapse followed this boom as a result of a market oversupply and decrease in demand.

The real estate industry has had several ups and downs throughout the years, with boom-and-bust cycles that have alternately offered possibilities for investment and generated hazards for investors. The years 2000 and 2010 are two examples (S.H Chan, 2003). Notwithstanding these difficulties, real estate has continued to be a well-liked investment choice, and the market has developed throughout time.

2020s: The worldwide COVID-19 epidemic had an influence on the real estate market in the early 2020s, changing consumer behaviour and economic conditions and presenting new possibilities and problems for real estate investors.

In addition, as technology has advanced and online real estate platforms have expanded, it has been simpler for individuals to invest in real estate, opening up new investment options.

### **3.5.1. Real Estate characteristics**

These are a few of the main attributes of real estate that make it such a desirable investment choice for so many people.

Real estate is a tangible asset since it is a physical object that can be touched, seen, and experienced (MURPHY, 2022). Compared to other asset classes, such as equities, which are intangible and prone to market volatility, this makes it a more solid and safe investment.

Real estate is a common investment choice for people wishing to earn passive income since it may provide revenue through rental income or the sale of the property. When it comes to rental properties, the monthly rent paid by tenants can give the investor a reliable source of revenue.

Real estate's value can improve over time through an effect known as appreciation, which occurs when the market conditions change. When the investor decides to sell the property, this may produce large returns for them (S.H Chan, 2003).

Diversification: Adding real estate to a portfolio of investments can help spread out the risk and give protection against market volatility. Those who invest in real estate can diversify their holdings over a number of properties, minimizing the effect of the performance of any one property on their whole portfolio.

Real estate is a more solid and secure investment choice than other kinds of assets since it is a tangible investment that can be seen, felt, and experienced. Those seeking for a reliable investment opportunity may find comfort in this.

Real estate is site-specific, which means that the location of the property affects its value. Property values tend to increase more quickly in desired locations than in less desirable locations, such as those close to large cities or in popular neighbourhoods.

Real estate is often viewed as a long-term investment since it might take time for the investment to develop and start producing sizeable returns. For people who want to invest for the long term and are prepared to wait for the gains to materialize, this can make it a suitable investment option (Chen, 2022).

### **3.5.2. Pros and cons of investing in Real Estate**

Real estate investing can have a number of advantages, but it's also crucial to be aware of any potential disadvantages.

Pros:

**Possibility for passive income:** The ability to create passive income through rental properties is one of the main benefits of real estate investing. This might offer a consistent cash stream to support other kinds of income. Depending on the location and kind of property, rental properties can provide returns of 4–10% annually, according to the National Association of Realtors (NAR) (National association of realtors®, 2021).

Real estate values have the ability to increase over time, offering the chance for capital gains when the property is sold. A research by the Joint Center for Housing Studies at

Harvard University found that historically, real estate values have increased over the long term at a pace of around 3% per year (Harvard Joint Center for Housing Studies, 2021).

Real estate is a tangible asset since it has a physical presence and may provide investors a feeling of security in contrast to other assets like stocks. Real estate is seen by the NAR as a "safe haven" investment that may offer stability in a choppy market (National association of realtors®, 2021).

**Tax advantages:** Investing in real estate may offer tax advantages, such as deductions for mortgage interest, real estate taxes, and depreciation. These deductions, in accordance with the Internal Revenue Service (IRS), can lessen your tax burden and lower your taxable income (Internal Revenue Service, 2022).

Cons:

**High upfront costs:** The high upfront expenditures of purchasing a property, including the down payment, closing charges, and repair and maintenance costs, are one of the largest drawbacks of real estate investing. The typical down payment for a rental property is around 20% of the purchase price, according to the NAR.

**Market risk:** Market circumstances and economic variables can have an impact on real estate prices, causing changes in the market value of properties. A research by the Federal Reserve Bank of St. Louis found that variables including interest rates, unemployment rates, and consumer confidence can have an effect on real estate values.

As a real estate investor, you have maintenance and management obligations for the property, including repairs, tenant interactions, and rental income collection. The NAR claims that managing property may take time and necessitates a certain amount of knowledge.

**Location risk:** Because a property's location can have a significant influence on its value, it is crucial to carefully analyze the property's location and the possibility of appreciation or depreciation. The NAR asserts that a property's location may significantly affect its ability to be rented out, its resale value, and its total return on investment

### **3.6. Commodities**

For investors wishing to diversify their portfolios and hedge against market volatility, commodities are a popular alternative investment choice. The creation of other goods and services, such as gold, oil, and agricultural products, depends on the availability of commodities, which are physical items.

Commodities are as follows: Basic items called commodities are employed in the creation of additional goods and services. These are interchangeable raw resources that are often exchanged on a commodity market with other commodities of the same sort. Usually produced and exchanged in large quantities, commodities are priced according to market supply and demand. They are different from conventional investments like stocks, bonds, and real estate, which is why they are regarded as an alternative investment (Caroline, 2022).

Hard commodities and soft commodities are the two categories into which commodities are traditionally split. Metals, minerals, and energy products like oil, natural gas, and coal are examples of hard commodities. Agricultural items such as wheat, coffee, cotton, and sugar are examples of soft commodities (Caroline, 2022).

The fact that commodities are impacted by supply and demand dynamics is one of their main features. For instance, if a natural disaster causes a reduction in a product's supply, this may result in a spike in the price of the commodity. Contrarily, if there is a rise in the demand for a commodity as a result of greater economic activity, this can also result in a rise in the commodity's price.

As the prices of commodities tend to rise during periods of inflation, they also serve as a hedge against inflation. This is due to the fact that producing commodities needs a sizable quantity of labour and resources, and the price of these inputs rises when inflation is present (Caroline, 2022).

Buying real commodities, investing in securities connected to commodities like exchange-traded funds (ETFs) or mutual funds, or taking part in commodity futures contracts are all examples of ways to invest in commodities.

Commodities tend to have low correlations with conventional assets like equities and bonds, thus investing in them can provide benefits for diversification (Caroline, 2022). This implies that the success of other investment classes may not have as much of an impact on the performance of commodities.

Commodity investment, however, is not without its difficulties. The extreme volatility of commodity prices, which may cause investors to suffer substantial losses, is one of the main problems. In addition, the commodity market is intricate and difficult to manage without a lot of expertise and experience.

Commodity characteristics:

**Tangible:** Commodities are tangible goods, which can be observed, felt, and experienced physically. Compared to other assets, like stocks, which are intangible and prone to market instability, they are therefore a more reliable and secure investment.

Commodities frequently exhibit inelastic demand, which means that even when prices rise, demand does not vary considerably. For instance, customers will always need to utilize oil for transportation, therefore it is a valuable and popular product.

Price Fluctuations: Commodities are prone to price volatility, which can result in big profits for those who choose to invest in them. Yet, this can potentially result in huge losses if the prices decline.

The structure of the commodities market is complicated, with many distinct participants and variables impacting the supply and demand of these items. Understanding the structure of the commodities market is vital for investors wishing to engage in this asset class.

### The Structure of the Commodities Market

The commodities market is made of various significant actors, including producers, processors, traders, and investors. Producers are the firms that extract or cultivate the commodities, while processors are responsible for refining or changing the raw commodities into a more useable form. Traders purchase and sell the commodities on the futures market, where prices are decided based on supply and demand. Lastly, investors may acquire futures contracts or exchange-traded funds (ETFs) that follow the price of the underlying commodities.

### The Commodities Futures Market

The commodities futures market is where the prices of commodities are decided. In this market, traders purchase and sell futures contracts for delivery of the underlying commodity at a defined date in the future. These contracts are standardized and exchanged on exchanges, such as the New York Mercantile Exchange (NYMEX) or the Intercontinental Exchange (ICE) (ICE). The price of a futures contract is impacted by various variables, including supply and demand, geopolitical events, and the status of the economy (Chen, 2022).

### Investing in commodities using Futures Contracts

Investors can invest in commodities by purchasing futures contracts on the commodities futures market. This sort of investment allows investors to bet on the future price of the underlying commodity. For example, if an investor feels that the price of gold will grow in the future, they can acquire a futures contract for gold delivery at a certain date. If the price of gold does climb, the investor will profit from the difference between the purchase price of the contract and the price of the underlying commodity upon delivery (Hayes, 2022).

### Investing in Commodities with Exchange-Traded Funds (ETFs)

Another alternative for investors to engage in commodities is through exchange-traded funds (ETFs) (ETFs). ETFs are investment vehicles that track the price of an underlying asset, such as a commodity or a basket of commodities. For example, an ETF that follows the price of gold would contain real gold and mirror its price changes. This sort of investment allows investors to enter the commodities market without having to physically trade futures contracts or acquire real commodities

#### Pros of Investing in Commodities:

**Diversification:** Commodities may give diversification to an investment portfolio, lowering risk and delivering protection against market volatility. By investing in commodities, investors may spread their investments over numerous assets, lowering the influence of any one asset's performance on their whole portfolio.

**Inflation Hedge:** Commodities are typically employed as a hedge against inflation, as their prices tend to increase when inflation rises. This can help safeguard investors' buying power and give stability during economic turmoil.

**Possibility for Returns:** Commodities can provide the potential for considerable returns, especially if the prices of the commodities improve. This can result in large rewards for those who choose to invest in them (PINO, 2022).

#### Cons of Investing in Commodities:

**Price Volatility:** Commodities are vulnerable to considerable price volatility, which can result in big losses for investors if the prices decline.

**High Fees:** Investing in commodities may be expensive, as investors generally have to pay hefty fees to acquire and store the commodities. This might diminish the total return on investment for investors.

**Lack of Diversification:** Commodities tend to be strongly linked, meaning their prices generally move in the same way. This can result in a lack of diversity in an investment portfolio, thus raising risk and vulnerability to market volatility.

**Supply and Demand:** Commodity prices are mostly governed by supply and demand, meaning they may be altered by global economic events and changes in consumer behaviour.

This might make investing in commodities a dangerous option for people who are searching for consistency in their finances (PINO, 2022).

### **3.7. Exchange - Traded Funds (ETFs)**

Exchange-Traded Funds (ETFs) have been increasingly popular in recent years as an alternative investment. ETFs provide investors an easy and cost-effective option to invest in a wide range of assets, including stocks, bonds, and commodities.

Structure of ETFs:

An ETF is a sort of investment vehicle that is traded on stock exchanges exactly like individual equities. Unlike mutual funds, which are valued at the end of each trading day, ETFs are traded continuously throughout the day, allowing investors to purchase and sell shares in real-time. ETFs are meant to replicate the performance of a certain underlying index, such as the S&P 500, or a particular asset class, such as commodities or bonds (Chen, 2022).

Advantages of Investing in ETFs:

**Diversification:** ETFs give investors with the chance to diversify their portfolios over a wide range of assets and industries. By investing in an ETF, investors may obtain exposure to a range of different assets, decreasing the risk associated with investing in a single stock or bond.

**Low Cost:** ETFs are frequently less expensive than traditional mutual funds, making them an attractive investing alternative for consumers on a budget. ETFs often have lower cost ratios and are exchanged at market prices, reducing the need for high-priced fund managers.

**Liquidity:** ETFs are traded on stock exchanges much like individual equities, making them extremely liquid and easy to trade. This lets investors to purchase and sell shares quickly and conveniently, without having to wait for a set price or negotiate intricate trading processes.



**Transparency:** ETFs are mandated to report their holdings on a regular basis, giving investors with more insight into the underlying assets of the fund. This makes it easy for investors to understand the composition of the fund and analyze its performance.

**Convenience:** ETFs are exchanged on stock exchanges, making them easily accessible and simple for investors to acquire and sell. This can make it easier for investors to construct and manage a diverse investment portfolio.

**Flexibility:** ETFs may be purchased and sold at any moment throughout the trading day, giving investors with greater flexibility compared to other investing alternatives. Moreover, ETFs may be utilized as a tool for short-term or long-term investing plans, making them a versatile investment alternative.

**Drawbacks of Investing in ETFs:**

**Price Volatility:** Like other assets, ETFs are susceptible to market swings and price volatility. This might result in huge losses for investors if the values of the underlying assets decline.

**Tracking Error:** ETFs are meant to track the performance of a certain underlying index or asset class, but there is always the chance of a tracking mistake. This implies that the performance of the ETF may differ from the performance of the underlying assets, which can result in underperformance relative to alternative investments.

**Complexity:** While ETFs can give investors with access to a wide range of assets and industries, they can also be complex and difficult to grasp for certain investors. This might make it difficult for investors to make educated investment decisions and judge the success of the ETF.

**Types of ETFs:**

ETFs may be roughly grouped into three categories: broad market ETFs, sector-specific ETFs, and specialty ETFs.

**Broad Market ETFs:** These ETFs give exposure to the broader market, such as the S&P 500, which monitors the performance of the 500 largest publicly listed firms in the US. These ETFs are suited for investors who wish to diversify their portfolios and achieve long-term gain (Chen, 2022).

**Sector-Specific ETFs:** As the name suggests, these ETFs focus on specific sectors of the market, such as technology, energy, or healthcare. These ETFs are ideal for investors who want to invest in a specific sector and are looking for higher returns.

**Niche ETFs:** Niche ETFs invest in specific areas of the market, such as emerging markets, real estate, or commodities. These ETFs are suitable for investors who want to invest in specific niche markets and are willing to accept higher levels of risk.

**How ETFs are Traded:**

ETFs are traded on stock exchanges just like individual stocks. Investors can buy and sell ETFs through a broker, just as they would buy and sell individual stocks. ETFs are priced based on the value of the assets they hold. The price of an ETF is determined by supply and demand, and the price changes throughout the day as the market changes (Chen, 2022).

When an investor buys an ETF, they are effectively buying a small piece of each of the assets held in the ETF. Conversely, when an investor sells an ETF, they are selling their small piece of each of the assets held in the ETF. ETFs can be bought and sold at any time during the trading day, just like individual stocks.

### **3.8. Cryptocurrency**

Cryptocurrency is a digital or virtual form of currency that operates independently of a central bank. Cryptocurrency is a decentralized digital currency that uses cryptography to secure and verify transactions, as well as to control the creation of new units.

Cryptocurrency operates on a decentralized ledger called a blockchain, which allows for secure and transparent transactions without the need for a central authority (Frankenfield, 2023). This is in contrast to traditional fiat currencies, which are issued and backed by central banks and it uses complex algorithms to maintain the integrity of its transactions.

**The Evolution of Cryptocurrency**

Cryptocurrency has come a long way since its inception in 2008 with the creation of Bitcoin. Since then, the world of cryptocurrency has rapidly expanded, with a growing number of digital assets now available for investment.

This article takes a look at the evolution of cryptocurrency, from its humble beginnings to its current state as a mainstream investment option.

### Origins of Cryptocurrency

The first cryptocurrency, Bitcoin, was created in 2008 by an unknown individual or group of individuals using the pseudonym Satoshi Nakamoto. The original whitepaper outlining the concept of Bitcoin was released in November of that year, and the first bitcoins were mined in January of 2009. Bitcoin was created as a decentralized digital currency that was not controlled by any government or financial institution, making it a revolutionary concept at the time (Anon., 2023).

### The Rise of Bitcoin

In the early years of cryptocurrency, Bitcoin was primarily used for small-scale transactions, with a small community of enthusiasts and early adopters. However, as the years went by, more and more people began to take notice of Bitcoin, and the value of the currency began to rise. By 2013, Bitcoin had gained significant recognition and was being widely discussed in the media (Danial, 2023).

This helped to further drive up its value, and it quickly became one of the hottest investment options of the time.

### The Birth of Altcoins

With the success of Bitcoin, a growing number of new cryptocurrencies began to emerge, collectively known as altcoins. These altcoins were designed to address specific problems or limitations of Bitcoin, and they included a variety of new features, such as faster transaction speeds, improved privacy, and additional functionality. Some of the most well-known altcoins include Ethereum, Ripple, and Litecoin.

### The Emergence of Blockchain Technology

The development of cryptocurrency was closely tied to the emergence of blockchain technology. A blockchain is a decentralized ledger of all transactions across a peer-to-peer network. This technology enables secure and transparent transactions without the need for a central authority, such as a bank or government (Hayes, 2022). The use of blockchain technology also ensures that cryptocurrency transactions are tamper-proof and irreversible.

### Adoption of Cryptocurrency

As the popularity of cryptocurrency grew, so too did the number of people and businesses who were interested in investing in it. By the mid-2010s, cryptocurrency had become a legitimate investment opportunity, and it was being traded on a growing number of online exchanges (Danial, 2023). In addition, a growing number of merchants and businesses began accepting cryptocurrency as a form of payment.

However, despite its growing popularity, the investment landscape for cryptocurrency remained largely unregulated, which led to a number of high-profile scandals and security breaches. Despite these challenges, the investment community remained optimistic about the long-term potential of cryptocurrency, and investment continued to grow.

Today, cryptocurrency continues to evolve and mature, and it remains one of the most exciting and dynamic areas of investment. With its unique combination of technology and finance, cryptocurrency is poised to play a major role in shaping the future of money and investing.

### **3.8.1. Characteristics of Cryptocurrency**

**Decentralized Nature:** Cryptocurrency operates on a decentralized network, meaning that it is not controlled by any central authority. Instead, it operates on a peer-to-peer network, where transactions are recorded on a decentralized ledger, such as a blockchain, and are maintained by a network of computers (Danial, 2023). This decentralized nature provides a level of security and transparency that is not present in traditional banking systems.

**Security:** Cryptocurrency uses complex cryptography to secure transactions and ensure that they are tamper-proof. The cryptographic algorithms used by cryptocurrency are designed to be extremely secure, making it very difficult for attackers to compromise the security of a cryptocurrency network (Kibet Amos, 2019).

**Anonymity:** Cryptocurrency transactions can be conducted anonymously, meaning that the identity of the parties involved in a transaction is not revealed. This provides a level of privacy and security that is not possible with traditional banking systems.

**Transparency:** The decentralized ledger used by cryptocurrency, such as a blockchain, provides a secure and transparent record of all transactions.

This ensures that the integrity of the transactions is maintained and that they cannot be tampered with (Kibet Amos, 2019).

**Limited Supply:** Most cryptocurrencies have a limited supply, meaning that there will only be a certain amount of units in existence. This helps to control inflation and ensure scarcity, which can increase the value of the currency over time.

### **3.8.2. Blockchain History**

Blockchain technology is a digital ledger system that has been used as the backbone of cryptocurrencies like Bitcoin. Despite its relatively recent popularity, the concept of blockchain has been around for decades.

#### **The Concept of Cryptographic Chain**

The concept of a cryptographic chain can be traced back to the early 1990s, when two young programmers, Scott Stornetta and Stuart Haber, began exploring ways to secure digital documents. The pair came up with a system that used cryptography to link together a series of blocks of information, creating an immutable chain that could not be tampered with. The system they developed was called a blockchain, and it served as the foundation for the blockchain technology that is used today (MENEZES Alfred J., 1991).

#### **The Birth of Bitcoin**

The first practical use of blockchain technology came in 2008, with the launch of Bitcoin, a decentralized digital currency that used blockchain to record and verify transactions. Bitcoin's creator, who went by the pseudonym Satoshi Nakamoto, built the currency on the idea of a decentralized ledger that would be maintained by a network of users, rather than by a central authority (Kibet Amos, 2019). This decentralized approach made it possible for Bitcoin to exist without the need for banks or other intermediaries, and it quickly gained popularity as a secure and efficient way to transfer value over the internet.

#### **The Emergence of Blockchain Technology**

In the years following the launch of Bitcoin, the technology continued to evolve and mature. New cryptocurrencies emerged, each offering new features and functionality, and the first blockchain-based applications began to appear, such as smart contracts and decentralized exchanges (Kibet Amos, 2019).

As more and more people began to understand the potential of blockchain, they began to explore new uses for the technology beyond cryptocurrencies. This led to the creation of blockchain-based systems for a variety of applications, including supply chain management, voting systems, and financial services.

### The Future of Blockchain

Today, blockchain technology is considered one of the most promising fields of development in the technology sector. With its ability to create secure, decentralized systems, it is seen as a potential solution to many of the problems facing the current internet. The future of blockchain is exciting and holds great promise, with many experts predicting that it will revolutionize the way of interaction with technology in the coming years.

### **3.8.3. The concept and structure of blockchain**

The concept of blockchain has been around for nearly three decades and has seen tremendous growth and innovation in recent years.

The structure of blockchain technology is based on blocks of data that are linked together in a chain. Each block contains a unique code, called a “hash,” that links it to the previous block in the chain. When a new transaction is made, it is recorded in a block, and the hash is updated to reflect the change. The new block is then added to the chain, and the entire network of computers must agree on the validity of the transaction before it is considered final. (Kibet Amos, 2019)

One of the key features of blockchain technology is its cryptographic security. The cryptographic algorithms used in blockchain technology are designed to ensure that once data is recorded in a block, it cannot be altered or deleted without the consensus of the network (Kibet Amos, 2019). This makes blockchain technology particularly well-suited for secure and transparent financial transactions, as well as for a wide range of other applications, such as secure voting systems and secure medical records.

Another important feature of blockchain technology is its transparency. All transactions recorded on a blockchain are visible to all participants in the network, making it possible for anyone to verify the accuracy and integrity of the data. This transparency helps to ensure that the system is secure and fair, and helps to prevent fraud and corruption.

The structure of blockchain technology consists of several key components that work together to provide its unique features and benefits.

### Blocks

The basic unit of a blockchain is a block, which contains a list of verified transactions. Each block is linked to the previous one through a cryptographic hash, forming a chain of blocks that make up the blockchain. The information contained in a block can be any type of data, but it is typically financial transactions, like the transfer of funds from one user to another.

### Nodes

The network of computers that run a blockchain is made up of nodes. Each node has a complete copy of the blockchain and is responsible for verifying new transactions and adding them to the blockchain. Nodes communicate with each other to reach consensus on the state of the blockchain, ensuring that all nodes have the same information (Kibet Amos, 2019).

### Mining

In a blockchain system that uses proof-of-work, like Bitcoin, transactions are verified through a process called mining. Miners compete to solve a complex mathematical problem in order to validate a block of transactions (Kibet Amos, 2019). The first miner to solve the problem adds the block to the blockchain and receives a reward for their efforts.

### Cryptographic Hashing

Blockchain uses cryptographic hashing to secure the data stored in the blocks. This involves taking the information in a block and running it through a hash function, which generates a unique digital fingerprint of the data. If a malicious actor tries to change the data in a block, it would change the hash, which would be noticed by the rest of the network and rejected.

### Consensus Algorithm

A consensus algorithm is a set of rules that govern how the nodes in a blockchain network reach agreement on the state of the blockchain.

Different blockchains use different consensus algorithms, with some popular examples being proof-of-work and proof-of-stake. The consensus algorithm helps to ensure the security and integrity of the blockchain by making it difficult for a malicious actor to manipulate the system (Kibet Amos, 2019).

#### **3.8.4. Types of cryptocurrency**

According to recent surveys, around 4.2% of the global population is currently invested in cryptocurrency (Anon., 2023). The popularity of cryptocurrency investment has also increased in recent years, with the total market capitalization of the cryptocurrency market reaching over \$1.16 trillion in 2023 (Anon., 2023).

##### Currency-Backed Cryptocurrencies

Currency-backed cryptocurrencies are digital currencies that are pegged to the value of a traditional fiat currency, such as the US dollar or the euro. The idea behind these cryptocurrencies is to provide a stable and secure form of digital currency that can be used for everyday transactions. Examples of currency-backed cryptocurrencies include Tether (USDT) and Circle (USDC) (USDC).

##### Asset-Backed Cryptocurrencies

Asset-backed cryptocurrencies are digital currencies that are backed by a real-world asset, such as gold or real estate. The value of these cryptocurrencies is tied to the value of the underlying asset, making them less volatile than other forms of cryptocurrency. An example of an asset-backed cryptocurrency is Digix Gold (DGX), which is backed by physical gold stored in a secure vault.

##### Utility Tokens

Utility tokens are cryptocurrencies that are designed to be used as a form of payment for specific goods and services within a particular ecosystem. These tokens are often used to incentivize users to participate in the ecosystem and can be used to access certain features or benefits. Examples of utility tokens include Binance Coin (BNB) and Golem (GNT) (GNT).

##### Object-Backed Cryptocurrencies



Object-backed cryptocurrencies are a type of cryptocurrency that is backed by a non-financial asset, such as artwork or collectibles. These cryptocurrencies are used as a way to invest in unique and valuable items, and the value of the cryptocurrency is tied to the value of the underlying object. One example of an object-backed cryptocurrency is CryptoKitties, which is a blockchain-based platform that allows users to collect and trade virtual cats (Kibet Amos, 2019).

### Security Tokens

Security tokens are digital assets that represent ownership in a company, asset, or fund. They are similar to traditional securities, such as stocks or bonds, but are traded on a blockchain rather than through a centralized exchange (Danial, 2023). Security tokens can offer investors access to a wider range of investment opportunities and can provide a more secure and transparent way of holding and trading assets.
















### Stablecoins

Stablecoins are a type of cryptocurrency that is designed to maintain a stable value, regardless of market conditions. They are usually pegged to a stable asset, such as the US dollar, or use algorithms to maintain their stability. The goal of stablecoins is to provide a form of digital currency that can be used for everyday transactions and to provide a hedge against market volatility (Danial, 2023). Examples of stablecoins include USDC, USDT, Tether, and Dai.

### 3.8.5. NFT

Non-Fungible Tokens (NFTs) have attracted a lot of interest in the digital world in recent years. Digital assets known as NFTs signify ownership of distinctive items like original artwork, collectibles, and even tweets. NFTs are unique and cannot be duplicated or traded for different currencies, in contrast to conventional cryptocurrencies, which are fungible, which means each unit may be used interchangeably with another. *Figure 1 Top 15*

*Cryptocurrency*

#	Name	Symbol	Price (USD)	Market Cap	Vol (24H)	Total Vol	Chg (24H)	Chg (7D)
1	 Bitcoin	BTC	24,355.5	\$472.00B	\$31.24B	46.89%	-1.83%	+10.24%
2	 Ethereum	ETH	1,655.31	\$203.59B	\$8.76B	13.15%	-2.62%	+7.14%
3	 Tether	USDT	1.0005	\$70.47B	\$45.31B	68.03%	+0.06%	-0.02%
4	 BNB	BNB	310.19	\$49.22B	\$578.13M	0.87%	-1.46%	+5.53%
5	 USD Coin	USDC	0.9998	\$42.14B	\$4.15B	6.23%	-0.01%	+0.01%
6	 XRP	XRP	0.38947	\$19.93B	\$1.09B	1.64%	-1.16%	+3.09%
7	 Cardano	ADA	0.3903	\$13.60B	\$383.88M	0.58%	-2.96%	+1.47%
8	 Binance USD	BUSD	0.9999	\$12.43B	\$9.09B	13.64%	-0.01%	+0.03%
9	 Polygon	MATIC	1.374	\$12.12B	\$788.05M	1.18%	-6.84%	+10.65%
10	 Dogecoin	DOGE	0.085207	\$11.36B	\$474.96M	0.71%	-3.38%	+2.60%
11	 Solana	SOL	24.749	\$9.48B	\$902.50M	1.35%	-4.96%	+15.09%
12	 Polkadot	DOT	7.248	\$8.42B	\$385.29M	0.58%	-3.85%	+16.80%
13	 Shiba Inu	SHIB	0.00001300	\$7.19B	\$342.92M	0.51%	-3.55%	+2.75%
14	 Litecoin	LTC	93.560	\$6.79B	\$691.61M	1.04%	-2.26%	-1.84%
15	 Avalanche	AVAX	21.19	\$6.70B	\$495.63M	0.74%	+2.88%	+17.49%

*Source: (Anon., 2023)*

#### Background of NFTs

Blockchain technology makes it possible to create distinctive, cryptographic tokens that may be used to signify ownership of special assets. NFTs may be created on a blockchain in 2017 because to the introduction of smart contracts, which were made possible by the Ethereum platform (Danial, 2023). This ushered in a new era of digital asset ownership and allowed for a plethora of fresh use cases.

An NFT is fundamentally a digital asset that denotes possession of a certain object. Using a blockchain, a decentralized digital ledger that securely records transactions, NFTs are developed and administered. The blockchain offers a safe and impenetrable method of tracking NFT ownership and transactions.

An NFT's creator specifies the distinctive qualities of the object it is meant to represent. The blockchain stores this data together with ownership details, resulting in a special token that symbolizes the asset. If someone wishes to change who owns the NFT, they may do so by simply transferring the token to the new owner; the blockchain will then update its record of ownership accordingly.

**The Structure of NFTs** The structure of NFTs is made up of a number of essential elements that combine to offer the special features and advantages of NFTs.

### Blockchain

NFTs are made feasible by the blockchain, which serves as the underlying technology. It is a decentralized digital ledger for securely storing ownership and transaction data. Although the characteristics of each blockchain vary, they all offer a safe and transparent means to record transactions and ownership data (Danial, 2023).

### Insightful Contracts

The details of the agreement between the buyer and seller are directly encoded into code in smart contracts, which are self-executing contracts. In a blockchain, they are utilized to control NFT ownership and transfer. Just transfer the token to the new owner to transfer ownership of an NFT, and the smart contract will immediately execute and update the ownership data on the blockchain (Danial, 2023).

### Digital currency tokens

Cryptographic tokens are one-of-a-kind digital assets that signify possession of a rare object. Each NFT token denotes ownership of a special object, such as a work of art or a collectable (Danial, 2023). These tokens are used to monitor NFT ownership and transactions and are kept on the blockchain.

### NFTs applications

NFTs offer a wide range of possible uses, including the establishment of virtual worlds and online marketplaces as well as the world of art and collectibles. NFTs are frequently employed for the following purposes:

The realm of art and collectibles is one of the first and most well-liked applications for NFTs. Digital art, limited edition prints, and rare collectibles are just a few examples of the distinctive digital assets that artists and collectors may sell and trade through NFTs (Danial, 2023).

These assets may be readily traced and exchanged as well as certified as real by employing NFTs, adding a new degree of security and confidence to the digital world.

**Virtual Real Estate:** The construction of virtual worlds where users may own, purchase, and sell virtual real estate is another common use for NFTs. They may all be represented as NFTs, such as virtual buildings, virtual creatures, and even virtual land (Danial, 2023). Users may trade and profit from their virtual possessions since the ownership of these assets is safe and traceable.

**Gaming:** NFTs have also made a name for themselves in the realm of video games, where they may be utilized to represent distinctive in-game goods like trinkets, armour, and weaponry. Players may buy, sell, and own these assets using NFTs, opening up additional revenue streams and enhancing the richness of the game experience.

**Music:** NFTs are also employed in the music business to let musicians and fans exchange and own special musical experiences, such concert tickets, merchandising, and even song releases. NFTs allow musicians to create fresh revenue streams while giving fans engaging new ways to interact with their music.

#### Market Situation

Both general market circumstances and individual NFT market conditions have a significant impact on how effectively NFTs work. Many variables, such as economic expansion and stability, governmental rules, and investor attitude, can influence market circumstances (Danial, 2023). The NFT market is likely to do well, for instance, if the economy is expanding, investor confidence is high, and the regulatory framework is steady. On the other hand, it is likely that the NFT market will function badly if there is economic instability, low investor confidence, and a great deal of regulatory ambiguity.

#### **3.8.6. Hedge Funds**

Hedge funds are financial vehicles that employ a variety of tactics to help them accomplish their goals, which may include boosting returns or lowering risk. These funds are controlled by qualified fund managers and are often only accessible to approved investors. Hedge funds are an example of an alternative investment, which means they don't trade on open stock markets and don't function in the same way as conventional investments do.

Alfred W. Jones founded the first hedge fund in the 1940s, beginning the history of hedge funds. Jones, a trained sociologist, developed the concept of a hedge fund while working as an investment counsellor on Wall Street (MALLABY, 2010). Jones understood the limitations of the conventional investing tactics employed by mutual funds and the requirement for a more adaptable investment vehicle.

Long-short strategy was the foundation of Jones's concept for a hedge fund. The long-short strategy entails purchasing inexpensive equities and selling overpriced stocks, according to the fund management. The intention is to profit from the spread between long and short bets.

Jones's first hedge fund was started in 1949 with a \$100,000 initial commitment. The fund was profitable, yielding a return of 670% during the next ten years (Lhabitant, 2007). By the 1960s, there were hundreds of hedge funds operating as a result of Jones's hedge fund concept, which was so well-liked that it gave rise to a new industry of hedge funds.

Hedge funds were largely accessible to affluent people and institutional investors in the 1960s. Nevertheless, the Securities and Exchange Commission (SEC) started to loosen rules on private placements in the 1970s, which made it simpler for hedge funds to raise money from a wider spectrum of investors (Lhabitant, 2007).

Hedge funds continued to gain prominence in the 1980s and 1990s, and many of the biggest investment banks and asset managers started their own hedge fund companies.

Hedge funds started using a larger range of tactics around this period, such as global macro, event-driven, and quantitative techniques.

Hedge funds were associated with Wall Street excess in the early 2000s because some of them made huge gains despite taking on a lot of risk. The hazards of highly leveraged hedge funds were made clear by the global financial crisis of 2008, and many firms incurred large losses as a result.

The Dodd-Frank Wall Street Reform and Consumer Protection Act, which was approved by the US government in 2010 as a reaction to the financial crisis, gave hedge funds additional rules and

increased reporting requirements. The laws imposed additional guidelines for risk management and investor protection, as well as registration with the SEC, disclosure of information about activities and holdings (TEALL, 2022). Hedge funds have maintained their rise in popularity despite heightened regulatory scrutiny, as more investors look to them for their potential high returns and advantages from diversification.

The assets managed by hedge funds today total trillions of dollars, and they use a variety of techniques, including long-short equity, distressed securities, and quantitative trading.

Hedge funds use a broad variety of techniques, some of which are intended to provide large returns while others are concentrated on risk control. The following are a some of the most popular hedge fund tactics:

**Long-Short Equity:** This strategy entails purchasing inexpensive equities and selling overpriced companies, according to the fund management. The intention is to profit from the spread between long and short bets.

With the global macro approach, bets are placed on macroeconomic patterns including interest rates, inflation, and currency fluctuations. Fund managers place transactions they think will result in profits based on their study of the global economy (Teall, 2022).

**Event-Driven:** With this approach, investments are made in businesses that are through a big event, such a merger, acquisition, bankruptcy, or spin-off. Profiting from the market inefficiencies that result from these occurrences is the aim.

**Distressed Securities:** This technique entails purchasing shares from businesses that are experiencing financial difficulties, such as those that have filed for bankruptcy or are drowning in debt. As the company's financial status improves, the intention is to purchase these shares at a discount and subsequently sell them for a profit (Lhabitant, 2007).

**Quantitative:** To execute trades, this technique makes use of statistical models and algorithms. Large volumes of data may be analyzed by these algorithms to find patterns and forecast market moves.

**Performance Analysis:**

Hedge funds have a history of providing investors with strong returns. Yet, depending on the particular fund and its investing strategy, the performance of hedge funds might vary

significantly. Due to lower-than-expected returns and greater costs than conventional investment vehicles, the performance of hedge funds has been under criticism in recent years (Teall, 2022).

Returns, volatility, and risk-adjusted performance are frequently used to assess the effectiveness of hedge funds.

Relative returns relate a fund's performance to a benchmark, such as the S&P 500 index, while absolute returns represent the actual return created by the fund. Returns can be quantified in a variety of ways.

Volatility gauges how much the assets of the fund fluctuate in price. Greater rewards and more risk can both result from greater volatility. Risk-adjusted performance evaluates the overall risk-adjusted return produced by the fund by taking volatility and return into account.

Several measures, such as the following, can be used to assess the performance of hedge funds:

The capacity of a fund to produce returns that are higher than the market average is measured by its alpha score. A fund that outperforms the market has a positive alpha.

$$\text{Alpha} = \text{Portfolio Return} - [\text{Risk-Free Rate} + \text{Beta} * (\text{Benchmark Return} - \text{Risk-Free Rate})]$$

Beta: A fund's beta value indicates how sensitive it is to market changes. A beta of 1 means that the fund follows the market's movements.

$$\text{Beta} = \text{Covariance}(\text{Portfolio Return}, \text{Benchmark Return}) / \text{Variance}(\text{Benchmark Return})$$

The Sharpe ratio: calculates the risk-adjusted return of a fund. A greater Sharpe ratio means that for each unit of risk taken, the fund is producing more return.

$$\text{Sharpe Ratio} = (\text{Portfolio Return} - \text{Risk-Free Rate}) / \text{Standard Deviation of Portfolio Returns}$$

The standard deviation: calculates how volatile the returns of a fund are. The fund is more volatile if its standard deviation is larger.

$$\text{Standard Deviation} = \text{Square Root of Variance}$$

Risk management: Due to the range of investment techniques utilized and the absence of regulation, hedge funds are regarded as high-risk investments. Hedge funds use a variety of risk management strategies to control risk and safeguard the money of its investors. Diversification, hedging, and leverage management are some of these strategies .

In order to distribute risk over a variety of asset classes, regions, and investing techniques, diversification is used. Hedging is the process of employing derivative financial products, such as options or futures, to reduce investment risk. As excessive leverage can raise a fund's risk, leverage management is controlling the amount of debt that the fund utilizes to finance its investments (Wilson, 2011).

Other dangers related to hedge funds include:

**Volatility:** Because of the sorts of investments they make and the leverage they employ, hedge funds may experience high levels of volatility.

**Liquidity:** Due to the limitations placed on investors' withdrawals in many hedge funds, it may be challenging to have access to your money when you need it.

Hedge funds frequently utilize complicated financial products like derivatives, which can put investors at risk of counterparty risk if the other party goes out of business (Wilson, 2011).

**Lack of Transparency:** Because hedge funds are exempt from public disclosure requirements, it can be challenging for investors to assess their performance.

Two types of fees are frequently levied by hedge funds:

**Fees for management:** These fees are calculated as a proportion of the assets under management and are normally payable at a rate of 2% annually.

**Performance Fees:** This fee, which generally amounts to 20% of fund earnings, is assessed as a percentage of those profits (WILSON, 2011).

**Regulatory and Legal Concerns:** The regulatory and legal framework in which hedge funds operate is complicated. The Securities and Exchange Commission (SEC), which oversees hedge funds in the US, mandates that they register with the organization and adhere to specific reporting and disclosure rules. Hedge funds that break securities laws are also subject to investigation and punishment by the SEC.

The Dodd-Frank Act's restrictions, which were enacted in 2010 in reaction to the global financial crisis, are also applicable to hedge funds in addition to SEC rules. Hedge funds were subject to greater restrictions and had to provide authorities with more information as a result of the Dodd-Frank Act.



Hedge funds are also vulnerable to a variety of legal problems, such as employment law concerns, contract conflicts, and potential accountability for investor losses. In order to negotiate these intricate legal difficulties and guarantee compliance with pertinent legislation, many hedge funds rely on legal guidance.

### **3.9. Investment strategies**

Any investment portfolio must have investing techniques. They establish the portfolio's risk and return profile and serve as a guidance for the investor's investment choices. The two basic kinds of investment methods are active and passive.

Investments that are Active

Active investing techniques aim to outperform the market by profiting from imperfections in the market. These methods feature a high level of portfolio turnover, necessitating attentive market monitoring and regular portfolio modifications from investors. Popular active investment methods include the following:

#### 1 Value Investing

Value investing is an investment technique in which investors seek out cheap stocks in the market with the expectation that their actual intrinsic worth will ultimately be realized and the price will grow in line with it. It was developed by Benjamin Graham and David Dodd in their 1934 book "Security Analysis," and many investors, including Warren Buffett, have utilized it effectively (Graham, 1934).

Investing in stocks that are trading below their real worth is the cornerstone of value investing. A stock's intrinsic value is an estimation of its real value based on the financial

health and future prospects of the firm. Investors employ a number of techniques, including discounted cash flow analysis, price-to-earnings ratios, and price-to-book ratios, to determine intrinsic value.

One of the core tenets of value investing is to place more emphasis on a company's long-term prospects than on momentary market swings. Companies with solid financials, a reliable business plan, and a competitive edge over their competitors are what value investors look for.

Also, depending on variables like profits, dividends, and book value, they search for firms that are selling below their actual value.

The significance of the margin of safety is yet another crucial component of value investing. The gap between a stock's current market price and its projected intrinsic value is referred to as the margin of safety (Greenwald, 2020).

Value investors can guard themselves against unanticipated occurrences that could have a negative impact on the stock price of the firm by purchasing a stock with a substantial margin of safety.

Several outstanding value investors have utilized this approach to generate excellent long-term profits. One of the most well-known value investors, Warren Buffett, has regularly beaten the market for many years by using a methodical approach to value investing.

Value investing does come with certain hazards, though. A stock's inherent worth could not ever be realized by the market since it can take some time for the market to catch up. In addition, even if the company's fundamentals continue to be solid, the stock may experience unanticipated difficulties that might adversely affect its price.

## 2 Growth investing

Growth investing is a form of investment strategy that focuses on making long-term investments in businesses with significant growth potential. Although it is a risky approach, it emphasizes capital growth above income production and has the potential to produce substantial returns. Finding businesses that are anticipated to develop faster than the market as a whole is the goal of growth investing. If they think a company's profits growth will continue to increase, investors who use a growth investing approach are often ready to pay more for a stock (SEGAL, 2021).

### Growth Investing History

The book "The Theory of Investment Value" by John Burr Williams, which was published in 1938, can be used to date the origins of growth investing to the early 20th century. According to Williams, a stock's worth is defined by the present value of its projected profits. As investors started concentrating on businesses with projected large profits growth in the future, this idea became the cornerstone of growth investing.

Growth stocks increased during the post-World War II economic boom in the 1950s and 1960s. Growth investing had tremendous development during the 1980s and 1990s as a result of the expansion of the technology industry.

Growth investment had a decline in the late 1990s due to the dot-com bubble, which occurred when investors overvalued the stocks of technological businesses that were predicted to have rapid growth (Malkiel, 2003).

#### Growth stock characteristics

Companies with excellent revenue growth and above-average profit growth are more likely to have growth stocks. These businesses frequently operate in fields that are going through substantial technical or societal development, and customers are in great demand for their goods and services. The price-to-earnings (P/E) ratio of growth companies is often greater than that of value stocks, indicating that investors are ready to pay more for expected profits growth.

#### How to Spot Growth Stocks

Several financial statistics can be used by investors to find growth stocks. The price-to-earnings growth (PEG) ratio is one of the most often utilized measures. The PEG ratio contrasts the P/E ratio with the profits growth rate of a corporation. PEG ratios below 1 are seen as inexpensive, while PEG ratios above 1 are regarded as overvalued. The price-to-sales (P/S) ratio, which contrasts a company's market capitalization to its revenue, is another helpful indicator. The P/S ratio gives a more realistic representation of a company's capacity for producing income, making it particularly helpful for assessing unprofitable businesses (Peter Lynch, 2000).

Earnings per share (EPS) growth rate, revenue growth rate, and return on equity are further indicators of growth stocks (ROE). These ratios may be used to spot businesses with significant room for growth that are most likely to beat the market in the long run. The price-to-earnings (P/E) ratio is one of the crucial indicators that growth investors look for when spotting new opportunities. This ratio evaluates the stock price in relation to the earnings per share of a firm (EPS). The market may have high expectations for the firm's future development if the P/E ratio is high, whilst a low P/E ratio may suggest that the company is undervalued (Peter LYNCH, 2000).

The possibility of significant returns is one of the main advantages of growth investment. The value of the company's stock rises together with its revenue and profitability.

But given how fast market expectations for a company's development prospects may shift, growth investing can be a risky strategy.

Growth investors frequently diversify their assets across many businesses and industries to reduce this risk.

The greatest development potential is often achieved over a number of years or even decades, so they also have a tendency to hang onto their assets for a long time.

A growth investment strategy can be put into action in a number of different ways, such as by purchasing individual stocks, mutual funds, or exchange-traded funds (ETFs) that concentrate on fast-growing businesses. The iShares Russell 1000 Growth ETF and the Vanguard Growth ETF (VUG) are two well-known growth-oriented ETFs (IWF).

### 3 Momentum investing

A well-liked investment approach called momentum investing seeks to find and invest in stocks that have recently performed well and are expected to do so in the future. It is predicated on the notion that stocks that have historically outperformed the market would do so again soon (Eugene Fama F., 1993). This tactic depends on market momentum, or the propensity of equities to keep advancing in the same direction over an extended period of time. In the hopes of making money off of their continuous rising momentum, momentum investors seek for companies that have had a recent upward price trend and purchase them.

#### Momentum investing's history

The early 1990s academic study of Eugene Fama and Kenneth French is where momentum investing first emerged. They discovered that equities with strong historical performance likely to continue doing so, but stocks with weak historical performance tended to do so as well. Momentum is the term given to this phenomena, which has subsequently come to be widely used in financial techniques (Eugene Fama F., 1993).

#### Investing strategy

The momentum investment technique entails purchasing equities with recent strong price trends and selling them with recent bad price trends.

The assumption behind this is that equities that have performed well in the past would continue to do so in the future, and vice versa, for stocks that have performed poorly. Momentum is measured across a range of time periods, usually between six and twelve months.

One of the key benefits of momentum investing is that it can provide a significant boost to portfolio returns.

A study by Jagadeesh and Titman (1993) found that a momentum-based investment strategy generated an average annual return of 12.01% from 1965 to 1989, compared to 5.83% for the market (Jegadeesh, 1993). Another study by Moskowitz and Grinblatt (1999) found that momentum investing produced an average annual return of 13.4% from 1965 to 1996, compared to 9.9% for the market (MOSKOWITZ, 1999).

Technical analysis is the most used technique for finding momentum stocks. Charts are used by technical analysts to spot patterns in stock prices and volume that point to strong or weak trends (SEGAL, 2022). Moving averages, the Relative Strength Index (RSI), and the MACD are the three technical indicators most frequently utilized in momentum investing (Moving Average Convergence Divergence). These indicators are used by technical analysts to spot companies that have demonstrated good momentum and purchase them in the hope that they will keep doing strongly.

Fundamental analysis is a different strategy for momentum investing. Fundamental analysts search for firms with significant sales and profit growth. Also, they search for businesses that are undervalued by the market since they may have the potential to perform better in the future.

#### Threat and Reward

A high-risk, high-reward investment approach is momentum investing. When momentum investors invest in equities that have performed well recently, they are purchasing securities that have already increased in value. As a result, if the market's trend shifts against them, they are more likely to see a substantial price decrease.

Notwithstanding the dangers, momentum investing provides a high rate of return. Stocks that have recently demonstrated great momentum are probably going to continue doing strongly in the foreseeable future. So, momentum investors who are successful in locating and purchasing these companies stand to make substantial returns.

## Investments that are Passive

Instead of attempting to outperform the market, passive investing methods are made to mimic the performance of a market index. Compared to active investing techniques, these solutions have lower expenses and fewer portfolio turnover. Popular passive investment methods include the following:

### 1 Index trading

The goal of the well-liked investment technique known as index investing is to mimic the performance of a large market index like the S&P 500 or the Dow Jones Industrial Average. The approach is based on the ideas that broad market indices offer inexpensive access to the stock market and that, over the long run, the stock market has a tendency to rise.

### Index Investing History

When John Bogle established the Vanguard Group and unveiled the first index fund that followed the S&P 500 in the early 1970s, index investing had its beginnings. Bogle's plan was to offer low-cost, low-risk stock market investing to clients (Bogle, 2017). With the intention of giving investors a return that closely resembled the general performance of the stock market, the index fund was created to duplicate the performance of the S&P 500.

Several investors were sceptical about index funds at the time because they thought they wouldn't outperform actively managed funds. Yet over time, the index fund's performance turned out to be rather enticing, and it started to draw in an increasing number of investor (Bogle, 2017)s.

With billions of dollars invested in index funds and exchange-traded funds (ETFs) globally, index investing is now a common investment technique. The strategy's appeal is largely attributable to its ease of use, cheap cost, and capacity to expose investors to a wide range of markets.

### Methods for Putting the Index Investing Approach into Practice

Depending on the aims and risk tolerance of the investor, there are several methods to apply the index investing technique. Some of the more popular methods are listed below:

**Buy and Hold:** This is the easiest and clearest approach to put the index investing strategy into practice. A long-term investor simply purchases shares of an index fund or ETF and holds onto them. Investors who wish to save costs and taxes may find this strategy to be a smart choice because it needs little active management.

**Cost-to-Dollar Averaging** This method entails making consistent, fixed investments into an index fund or ETF regardless of the state of the market. Investors who worry about timing the market may find this strategy to be a suitable alternative since it may assist to smooth out market volatility (Evans, 1999).

**Sector rotation:** With this strategy, investments are made in various economic sectors at various points in time to benefit from shifting market conditions. At a time of fast technical advancement, an investor would devote a larger portion of their portfolio to technology firms, and during a time of aging demographics, they might switch to healthcare equities.

## 2 Dividend investing

Choosing firms that consistently provide dividends to their owners is the main goal of the dividend investing method. Income-seeking investors who appreciate the consistent income stream offered by dividends have historically favoured dividend-paying equities.

### Dividend investing history

For many years, dividend investment has been a well-liked tactic, and the idea of value investing is frequently connected with it. The rationale behind buying dividend-paying equities is the assumption that dividend-paying businesses are more dependable and stable than non-paying ones (Graham Benjamin, 2016). Dividend-paying companies are viewed by many investors as a means to diversify their investment portfolio while simultaneously generating income.

The Dutch East India Company started regularly paying dividends to its stockholders in the early 1600s, according to the first records of equities that pay dividends (Beattie, 2022). Throughout the 1800s, as more businesses adopted the strategy of paying shareholders regular dividends, the practice of distributing dividends expanded. Nowadays, dividend-paying companies can be found in many different sectors and industries, and they play a significant role in the portfolios of many investors.

### Methods for Putting the Dividend Investing Plan into Practice

The dividend investing plan can be carried out using a variety of different methods. Here are a few illustrations: yield on dividends Dividend yield is calculated by dividing the yearly dividend payment of a company by its market value. This indicator is well-liked by dividend investors since it may be used to find firms with comparatively large dividend distributions.

A solid, dependable business that is dedicated to delivering dividends to its shareholders may be indicated by a high dividend yield.

Dividend Growth: The pace of increase in a company's dividend payments over time is known as dividend growth. This is a crucial indicator for dividend investors since it may show which stocks are most likely to keep increasing their dividend payouts over time (Graham Benjamin, 2016). Businesses that are able to steadily raise their dividends over time are frequently considered as indicators of sound management and stable finances.

The dividend payout ratio measures the proportion of a company's earnings that are distributed as dividends. An organization may have lots of opportunity to raise its dividends in the future if it has a low dividend payout ratio, whereas an organization with a high dividend payout ratio may be overextending itself and may not be able to sustain its dividend payments over the long run.

Formulas for dividend investing:

Dividend Yield = Annual Dividends Per Share / Price Per Share

Dividend Growth Rate =  $[(\text{Recent dividend (D2)} - \text{Previous dividend (D1)}) \times 100] / \text{Previous dividend}$

Dividend Payout Ratio = Dividends Paid / Net Income

Dividend Discount Model =  $\text{Expected Dividend Per Share} / (\text{Cost of Capital Equity} - \text{Dividend Growth Rate})$

3 Balanced investing



With the purpose of generating a certain amount of return while controlling risk, balanced investing is a technique that combines two or more asset types in a single portfolio, such as stocks, bonds, and cash (Fernando, 2022). This method has a lengthy history of use and is frequently used to long term financial decisions.

Investors that wish to reduce the impact of market volatility on their portfolio and seek a more steady investing approach frequently utilize this method.

### History

Investors have long utilized the balanced investing strategy, which is based on the diversification and asset allocation tenets. As investors started to understand the advantages of including both stocks and bonds in a portfolio, in the 1920s and 1930s, the concept was born. The pioneer of value investing, Benjamin Graham, popularized this strategy by promoting a well-balanced portfolio of stocks and bonds as a method to lower risk and increase profits. Graham stated in his book "The Intelligent Investor" that by diversifying their portfolio with a mix of stocks and bonds, investors may strike a balance between risk and profit (Graham Benjamin, 2016). The idea of balanced investing has developed through time, and it is now a popular investment strategy that is frequently employed in conjunction with mutual funds and exchange-traded funds (ETFs).

### Principles

The idea behind balanced investing is to build a portfolio with a variety of assets that can help lower risk and boost profits. Stocks, bonds, and cash or cash equivalents are the three types of assets that are most frequently utilized in a balanced portfolio. By investing in a combination of stocks, bonds, and cash, the objective is to build a portfolio that will perform well in various market circumstances and to attain a particular amount of return while controlling risk. The risk tolerance and investing objectives of the investor determine the proportion of each asset type in the portfolio.

### Implementation

Investors must choose the proper asset allocation for their portfolio in order to put a balanced investment plan into practice. The allocation will be based on the investor's age, risk tolerance, and investing objectives, among other things. A balanced portfolio will typically consist of 60% to 70% stocks and the remaining portion of fixed income assets (Anon., 2022).

Many methodologies, such as the contemporary portfolio theory, which optimizes the portfolio using statistical methods, can be used to establish the asset allocation.

Investors must choose individual assets within each asset class after the asset allocation has been decided.

For instance, investors may decide to invest in individual stocks or exchange-traded funds (ETFs) in the equities component and in bonds or bond ETFs in the fixed income half.

The portfolio weight, which is computed by dividing the value of a particular investment by the entire value of the portfolio, is one of the major formulae used in balanced investing. A number of strategies, such as current portfolio theory, which employs statistical methods to optimize the portfolio, can be used to establish the asset allocation.

### **3.10. Comparison of different investment strategies**

#### **3.10.1. Advantages and disadvantages of the strategies**

Advantages of Value investing

Potential for High Returns

The possibility for significant profits is one of value investing's main benefits. This is due to the fact that value investors purchase undervalued stocks—stocks that are priced below what they are truly worth—in the market. The price of the stock will increase when the market ultimately realizes its actual worth, and the investor will make money. Recognizing value may take some time, but in the long run, it may produce great rewards.

Reduced Risk

Comparing value investing to other investment philosophies, it is also seen to be a lower-risk technique. This is because there is less chance of a stock's price falling because the investor is buying an undervalued stock (Graham Benjamin, 2016).

By owning the stock and collecting dividends, the investor can still make money even if the stock price stays flat.

#### Clear and Straightforward to Understand

Value investing also has the benefit of being a straightforward and basic investment approach.

It entails purchasing inexpensive stocks and holding them for an extended period of time.

Because of this, both inexperienced and seasoned investors may access it.

#### Focus on the Basics

The fundamentals of a firm, such as profits, assets, and cash flow, are heavily weighted in value investing (Graham Benjamin, 2016). This indicates that an investor is funding a business with a strong financial basis, increasing the chance of long-term success.

#### Disadvantages of Value investing

##### Time-consuming

The fact that finding inexpensive companies takes a lot of time and effort is one of the main drawbacks of value investing. To ascertain a company's intrinsic worth, an investor must carefully examine its financial statements (Graham Benjamin, 2016). This can take a lot of time and investigation, which isn't always possible for investors.

##### Requires Patience

Value investing demands patience because it may take some time to recognize value. An investor must be prepared to hang onto the stock for a considerable amount of time and wait for the market to finally value it appropriately.

##### Uncertainty

Uncertainty exists in value investing since it is hard to forecast how the market will respond to a stock. There is no assurance that the market will finally identify a stock's actual value, even if it seems discounted at the time, which might result in losses for the investor.

##### Value Suckers

Value traps, which are stocks that seem inexpensive but may not be, should be avoided by investors. A stock that appears to be a bargain but is actually in decline and might not recover is called a value trap. The investor may suffer large losses as a result of this.

## Benefits of Growth Investing

### High Return Potential

High returns may be obtained via growth investment. The stock price of a firm that is expanding quickly might increase dramatically if you invest in it. When the business expands, it may provide bigger earnings, resulting in even better returns for investors. A focus on originality and creativity

Innovation and creativity are prioritized in growth investment. Investors seek for businesses that are creating novel goods or services or upending established markets with cutting-edge technology. This focus on innovation may lead to investments in businesses with excellent long-term prospects. low payouts for dividends (Graham Benjamin, 2016).

Growth corporations often don't pay dividends to shareholders instead, they reinvest their earnings back into the company. For growth investors seeking for businesses with high long-term potential, this may be advantageous. The corporation may maintain growth and raise the stock price by reinvesting earnings (Graham Benjamin, 2016).

### Disadvantage of growth investing

#### High Valuations

Growing firms frequently have high values, which means that their potential is already reflected in the stock price. Finding inexpensive companies may become challenging for growth investors as a result.

#### Volatility Risk

Value stocks frequently have lower volatility than growth equities. This is so because growth potential is something investors pay a premium for, and the stock price might drop sharply in the event of any bad news or economic headwinds. Growth investment may be a greater risk approach as a result of this volatility.

Less focus on the fundamentals

Compared to value investment, growth investing gives less weight to a company's fundamentals.

Growth corporations may have rapid revenue growth and have a dominant market position, but they may also experience poor financial performance or significant levels of debt. For investors who take a more cautious approach, this may be a drawback.

Momentum investing benefits:

**High Possible Returns:** For investors, momentum investing may result in substantial profits. This is so that assets that have recently done well are more likely to do so in the near future. Investors can profit from the asset's rising price trend as a consequence (Graham Benjamin, 2016).

**Simple to Implement:** Putting momentum investing into practice is not difficult at all. Investors may find the assets with the strongest momentum using a range of technical indicators, and then they can buy those assets (Graham Benjamin, 2016). Because of this, momentum investing is available to both inexperienced and seasoned investors.

Momentum investing may be used to diversify a portfolio of investments. Investors can lower their total risk exposure by making investments in assets that have significant momentum across several industries and asset classes.

The drawbacks of momentum investing include:

**Market volatility:** The sensitivity of momentum investing to market volatility is significant. Assets that were performing well might swiftly lose momentum if the market undergoes a dramatic drop, causing investors to suffer substantial losses.

**Timing:** Successful momentum investing needs investors to appropriately timing the market. It can be difficult to foresee when an item will lose momentum since momentum can change fast.

Momentum investment may be affected by behavioral biases like as overconfidence and herding tendency. Even if an asset has high momentum but is expensive, investors may be enticed to buy in it to fit in with the crowd.

Index Investing Benefits Low Cost

The cheap cost of index investing is one of its key benefits. In comparison to actively managed funds, index funds often charge cheaper fees.

This is so because index funds are handled passively and need less investigation and analysis. This implies that the fund management does not actively purchase or sell individual equities, but only monitors the underlying index. Over time, lower costs translate into greater profits for the investor.

#### Diversification

A diversified portfolio may be created for investors through index investing, which gives wide market exposure. This is because an index fund helps to lower the risk of losses from individual equities by investing in all the businesses included in the underlying index. Investors can also expose themselves to various sectors, industries, and geographical areas by purchasing an index fund (Malkiel, 2003).

#### Similar to Market Returns

Market-like returns are offered via index investing, which allows investors to profit from the market's average return. This is due to the fact that index funds follow the underlying index, which captures the performance of the market as a whole. Index funds are a desirable investment option for those looking to accumulate wealth over the long run because of the potential for consistent and dependable returns over the long term.

#### Passive Administration

Index investing is a passive technique for investing, thus it takes less time and effort than actively managed funds. This is so that an index fund manager may simply monitor the underlying index without having to undertake a lot of in-depth investigation and analysis (Graham Benjamin, 2016). As a result, index investing offers investors a simple and practical approach to get market exposure.

#### Index Investing Drawbacks

##### Restricted Flexibility

Index investing gives just a small degree of freedom because the fund management cannot choose specific stocks. So, the investor is exposed to every company featured in the underlying index, including those with subpar performance.

Moreover, index funds are unable to profit from transient market inefficiencies, which may restrict the possibility of higher returns insufficient active management

As index funds don't have active management, they might not be able to take advantage of market trends or potential opportunities (Graham Benjamin, 2016). This may lead to missed investment opportunities for the investor, particularly during times of market turbulence.

Because they follow the underlying index, index funds are susceptible to market risk. This implies that the index fund's value decreases together with the market's. The investor may suffer substantial losses as a result, particularly in weak markets.

#### Benefits of Investing in Dividends:

**Stable Income:** Dividend investment provides investors with a steady income stream through recurring payments provided by the businesses in which they participate. This income stream can be utilized to boost a portfolio's total return or to give investors who are searching for dependable income sources a regular income.

**Low Volatility:** Stocks that pay dividends frequently have lower volatility than those that don't. This is due to the fact that firms that pay dividends are frequently older and have a history of stable profits and cash flow (Eugene Fama F., 1993). As a result, they are less vulnerable to significant price fluctuations in reaction to market conditions.

Dividend reinvestment can help an investor's gains snowball over time. Investors can expand their total investment position by reinvesting dividends in the form of free extra shares of the stock. Reinvesting dividends can have a compounding impact over time that produces sizable profits.

Dividend payments can operate as an inflation hedge by helping to lessen the effects of escalating prices over time. This is due to the fact that businesses that pay dividends frequently increase them over time to keep up with inflation, which might assist to maintain investors' buying power (Graham Benjamin, 2016).

Dividend investing disadvantages include:

**Reduced Capital Appreciation:** Compared to non-dividend-paying corporations, dividend-paying companies may be less likely to achieve considerable capital appreciation. This is due to the possibility that corporations that pay dividends may prefer to invest in growth possibilities over repaying income to shareholders.

**Economic Cycle Vulnerability:** Companies that pay dividends may be more susceptible to economic downturns than non-dividend-paying enterprises (Graham Benjamin, 2016). This is due to the fact that businesses that pay dividends may not have as much financial flexibility during downturns in the economy since they are obligated to distribute a certain percentage of their revenues to shareholders.

**Dividend reductions:** In reaction to shifting market conditions or internal financial challenges, companies may reduce or stop paying dividends. Due to the fact that the loss of dividend income can substantially lower the overall return on investment, this may have a detrimental effect on an investor's portfolio.

**Overemphasis on Dividends:** If a portfolio is unduly focused in a particular area or industry, it may be due to a focus on dividend-paying firms. If that industry or sector faces a slump, this might increase the likelihood of underperformance.

Benefits of a balanced investing

**Diversification:** Diversification is one of the main benefits of balanced investment. The risk is distributed among a variety of assets when you invest in a variety of asset classes, which can assist to lower the portfolio's total risk.

**Reduced Volatility:** By offering a variety of assets with various risk profiles, balanced investment can assist to minimize volatility. For instance, bonds tend to be less volatile than stocks and can aid in lowering the portfolio's total risk.

**Possibility for Growth:** Balanced portfolios are made to offer both income and potential for growth.



Although though a balanced portfolio may not place as much focus on growth as other techniques, like growth investing, it can nevertheless offer considerable long-term growth potential.

**Income generation:** Investments that generate income, including bonds and dividend-paying equities, are frequently included in balanced portfolios. This may offer a consistent source of income that may be utilized to complement pensions and other income streams like Social Security.

#### Disadvantages of balanced investing

**Reduced Returns:** Because a balanced portfolio has a variety of various asset classes, growth may not be as important as it is in other investment methods. As a result, the possibility for larger returns may be less than with growth-centric strategies.

**Increased Fees:** Compared to other investment types, a balanced portfolio often needs more regular rebalancing and monitoring, which might result in higher fees and costs (Graham Benjamin, 2016). Before adopting this technique, investors should carefully weigh the expenses involved.

**Complexity:** Due to the fact that balanced investing calls for a thorough grasp of the many asset classes and how they interact with one another, it might be more difficult than other investment techniques. For inexperienced investors, this may make it harder to implement.

## **4. Practical part**

### **4.1. Investment goals and Risk tolerance**

The three most typical sorts of investing goals are as follows:

Preparing for retirement or investing in real estate for the very long term (15 years or more)

Living circumstances, such as school costs in the medium term (10-15 years)

Throughout the medium to short term, use rainy day or lifestyle savings to finance objectives like a dream sports vehicle (5-10 years).

All sorts of investment should have a minimum time horizon of five years.

Risk is a component of all financial investments. As a result, neither the investment value nor the income from it can be guaranteed, nor can the amount of the initial investment. Thus, the concept of risk tolerance. Whether creating an investment portfolio or a detailed financial plan, risk tolerance is one of the most crucial factors, if not the most crucial one. The amount of loss an investor is willing to take on while making an investing choice is referred to as risk tolerance.

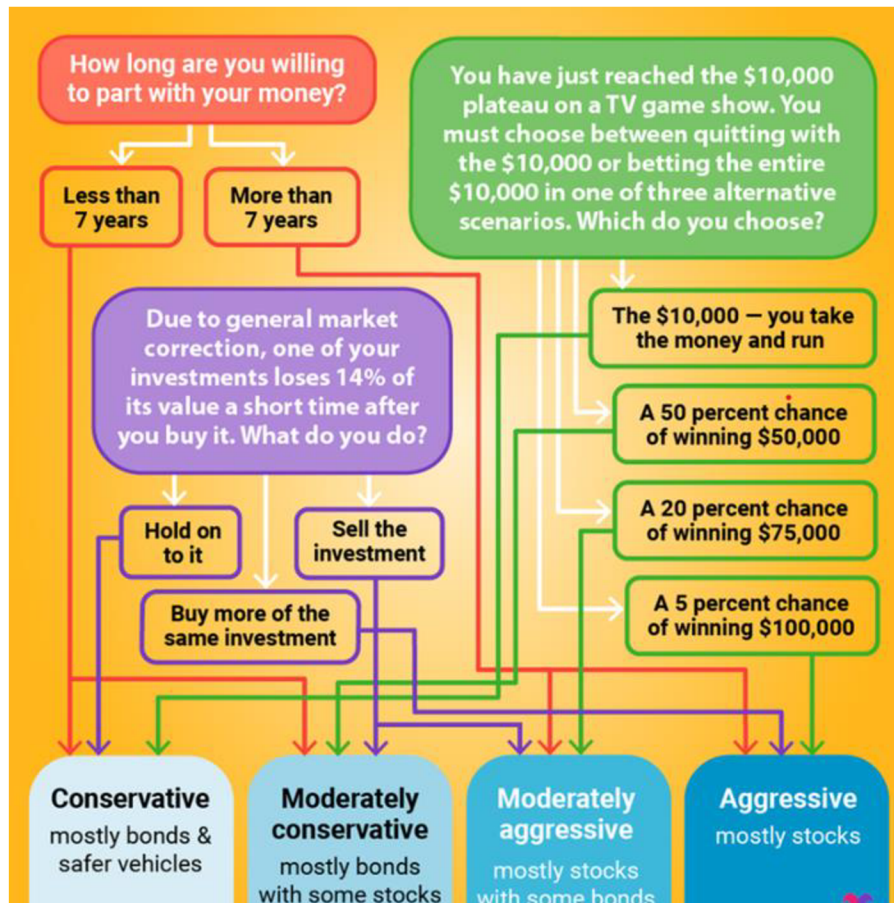
Risk tolerance can take a number distinct forms:

**Conservative:** those who have a lower-than-average tolerance for risk while making investments. These investors typically choose an asset allocation that includes greater proportions of cash, money market funds, certificates of deposit (CDs), certain fixed income instruments, and real assets.

**Moderate:** those who have a balanced perspective on investing risk. These investors could choose shares that are equal to or almost equal in value between riskier and safer assets. A moderate risk-taker, for instance, may allocate their assets as follows: 50% common stocks, 40% fixed income securities, and 10% cash. **Aggressive:** Capable and willing to withstand greater amounts of danger.

These investors typically have large concentrations of equities and other volatile assets in their portfolios, sometimes even speculative assets like cryptocurrencies or NFTs. Although this is by no means a rule, these investors tend to be on the younger end of the investing demographic.

Figure 2 How to determine your risk tolerance



Source: (Swenson, 2022)

## 4.2. Risk and Return relationship

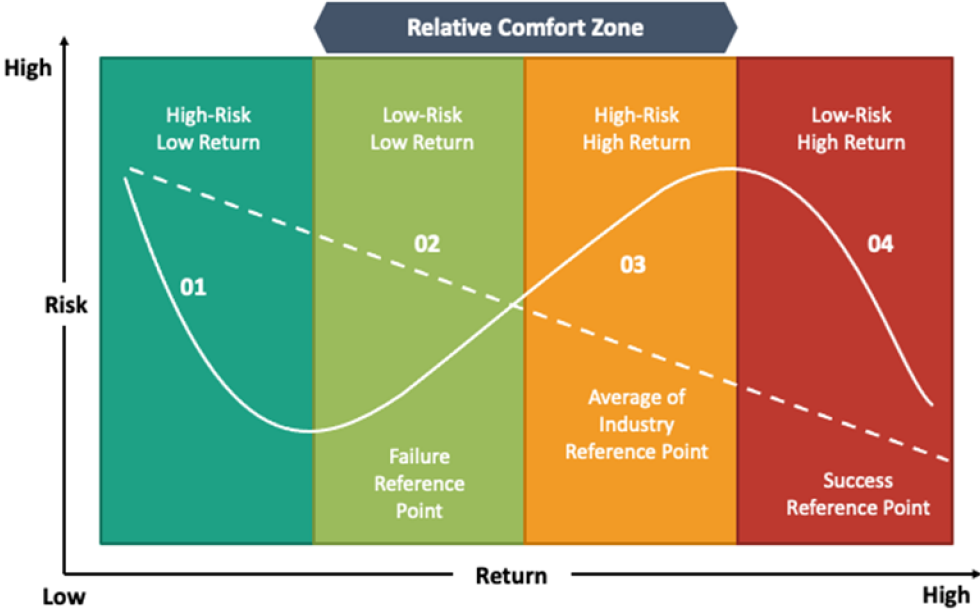
One of the core ideas in finance is the connection between risk and return. It implies that an investor's prospective return is directly correlated with the amount of risk they are prepared to accept. The danger is larger when the possible reward is bigger.

Investors frequently weigh the possible profits and the corresponding risks while assessing various investment opportunities.

Investors are often prepared to accept more risks in exchange for the possibility of greater profits. They must, however, strike a balance between this and their own investing objectives and risk tolerance.

Figure 3 Risk and Return relationship

### RISK RETURN RELATIONSHIP MODEL



Source: (Anon., 2022)

Direct

Relationship between Risk and Return

High Risk - High Return

According to this kind of connection, an investor will receive higher compensation if he takes on more risk. As he invested \$1 million, his risk of loss is \$1 million. Let's say he receives a 10% return. As he invested more money, even if his return was lakh, his chance of financial loss was million. He will now receive Lakh in return.

Low Risk - Low Return

Risk and reward have a direct link as well. if the investor lowers their investment. That implies that as he lowers his risk of loss, his return will do likewise.

Negative Relationship between Risk and Return

High Risk Low Return

Investors occasionally raise their investment amounts in an effort to receive big returns, however as returns grow, they can experience low returns due to the nature of the project. An increase in investment in such a project is not advantageous. Let's say there are 100,000 lottery draws where you can win the reward of You have purchased half of all lotteries. But, if you purchase 75% of lotteries. The prize will remain the same, but as your risk increases, your return will fall.

Low Risk High Return

There are certain initiatives where a small investment can result in a large return. For instance, the Indian government needs money. because the government is offering a big return on a little investment and needs this money in an emergency. If you take advantage of this chance and invest your money, you will receive a large return for a low risk of financial loss.

Formulas for analysing and attempting to quantify the relationship between risk and return:

$$SFRatio = R_p - R_f / \sigma_p$$

Where:

$E(R_p)$  is the expected portfolio return

RL is the threshold level return (the minimum acceptable return)

$\sigma_p$  is the standard deviation, or risk, of the portfolio

This formula provides a probability of getting a minimum-required return on a portfolio; an investor's optimal decision is to choose the portfolio with the highest SFRatio (SEGAL, 2022).

$$\text{Sharpe Ratio} = R_p - R_f / \sigma_p$$

Where:

$R_p$  = return of portfolio

$R_f$  = risk-free rate

$\sigma_p$  = standard deviation of the portfolio's excess return

This calculation compares an asset's, fund's, or portfolio's return to the performance of a risk-free investment, most commonly the three-month U.S. Treasury bill. The greater the Sharpe ratio, the better the risk-adjusted performance (SEGAL, 2022).

### **4.3. Importance of Diversification and Asset Allocation**

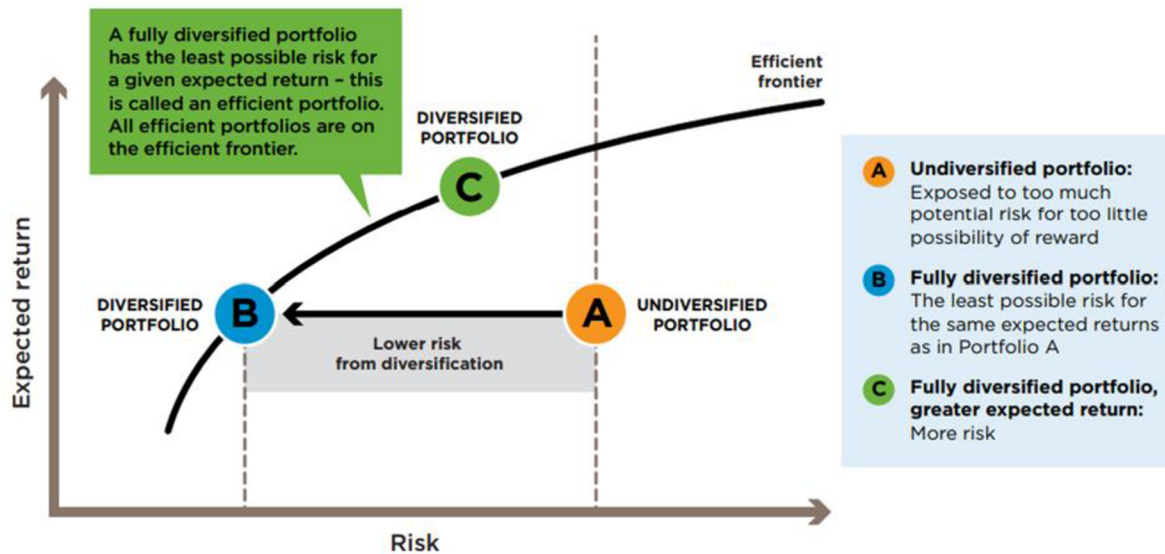
The act of investing in a range of assets spreads risk among several holdings and is known as diversification. Investors can lessen the effect of any one asset or market sector on their total results by maintaining a diverse portfolio. A balance between risk and return is desired, where the advantages of diversity exceed the disadvantages.

A portfolio may be easily diversified by investing in a variety of asset types, such as stocks, bonds, and cash. These assets are impacted by various market and economic situations and have various risk and return characteristics.

For instance, compared to bonds, which are more stable but provide lower returns, stocks are often more volatile but have larger potential rewards. Investors may balance their portfolio's risk and return by holding a variety of assets.

Investing in several businesses or sectors within an asset class is another approach to diversify. For instance, there are several industries, such as technology, healthcare, and energy, inside the stock market. These industries are driven by many factors and are affected by various market and economic situations. Investors can further diversify their portfolios and lower the risk of concentration in any one sector by making investments in a variety of areas.

Figure 4 Risk and Diversification



Source: (Fund, 2018)

## Asset Allocation

To achieve a desired risk and return profile, asset allocation is the technique of distributing an investment portfolio among various asset classes. A balanced portfolio should be built with the investor's objectives, risk tolerance, and time horizon in mind.

The theory behind asset allocation is that various asset classes have various risk and return characteristics, and that the ideal mix of assets relies on the investor's objectives and risk tolerance. An aggressive investor could choose a portfolio with a larger allocation to stocks, whereas a conservative investor might prefer one with a higher allocation to bonds and cash.

The mean-variance optimization approach may be used to identify the ideal asset allocation. Using this approach, the expected return on a portfolio is maximized for a particular degree of risk.

The collection of portfolios that provide the best anticipated return for a certain amount of risk is known as the efficient frontier, and the ideal portfolio is the one that is on this frontier.

#### **4.4. Analysis of the performance of investment strategies**

##### Value vs Growth investing

Value funds made a much-anticipated return in 2021. Although while it wasn't as dramatic as some had hoped, value funds outperformed growth funds for the year after having their worst year in comparison to growth funds. Small-value funds led the way with an average return of 31.7%, the largest gain among all Morningstar Style Box categories, as the small-cap funds had the greatest recovery. Small-growth funds, on the other hand, only had an increase of 11.1% in 2021, a considerable 20.6 percentage point difference. The key factor in the success of small-value funds was the outstanding performance of regional banks, whereas small-growth funds were held back by floundering biotech companies.

But, among big-cap funds, value's advantage was less obvious, with both large value and large growth funds finishing the year up by more than 20%. Growth outpaced large value by 5.6 percentage points. In contrast to the previous year, when large-growth funds beat their value counterparts by more than 30% in 2020, this is a major improvement.



Figure 5 Value vs Growth investing

	<b>1-Year</b> <small>(1/1/2021- 12/31/2021)</small>	<b>3-Year</b> <small>(1/1/2019- 12/31/2021)</small>	<b>5-Year</b> <small>(1/1/2017- 12/31/2021)</small>	<b>10-Year</b> <small>(1/1/2012- 12/31/2021)</small>
Large Value	26.08	17.40	11.41	12.06
Large Growth	20.46	28.85	21.75	17.12
<b>Value-Growth Performance</b>	5.62	-11.45	-10.34	-5.06
Mid-Cap Value	29.39	18.43	10.45	12.15
Mid-Cap Growth	13.20	27.15	19.03	15.17
<b>Value-Growth Performance</b>	16.19	-8.72	-8.58	-3.01
Small Value	31.68	18.35	8.88	11.31
Small Growth	11.12	24.77	17.33	14.68
<b>Value-Growth Performance</b>	20.56	-6.41	-8.45	-3.37

Source: (Lynch, 2022)

Since technology and communication services businesses, which are more frequently held in growth-oriented funds, led the U.S. market recovery from its March lows, value funds saw their worst year compared to growth in 2020. Every sector saw gains in 2022 as the housing market heated up, oil prices rose, and the economic recovery widened. Several long-dormant value stocks also began to thrive.

For the first time since 2016, value funds outperformed growth funds in 2021. It was the strongest year for mid-cap value and small-cap value funds in comparison to their growth counterparts since 2001, when value funds rebounded in the wake of the dot-com bubble implosion.

Figure 6 Annual Value-Growth Performance Differential

**Annual Value-Growth Performance Differential (Percentage Points)**

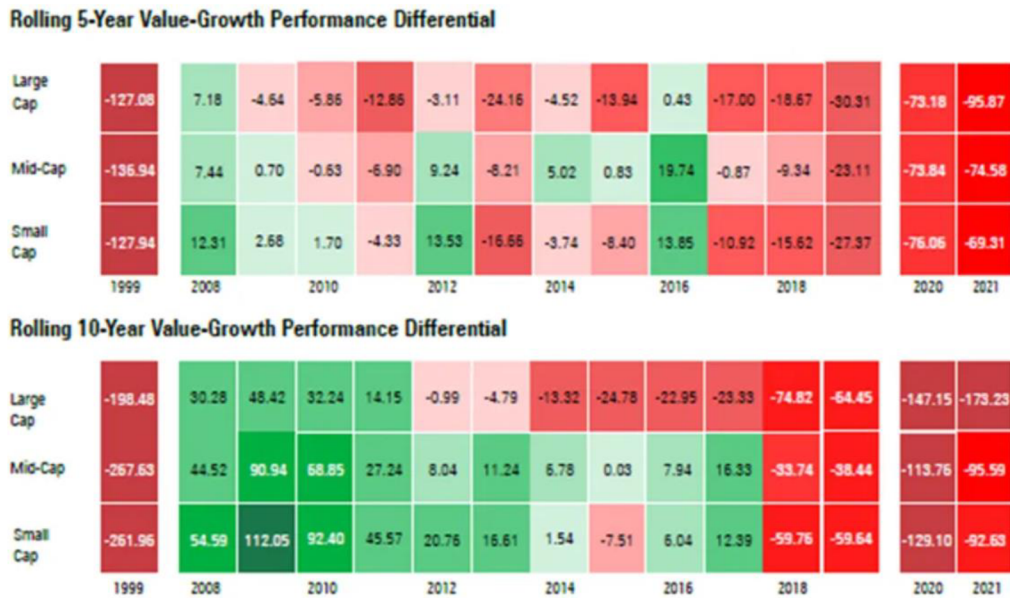
Large Cap	-30.66	20.38	17.25	8.75	-0.09	5.04	-0.84	11.10	-11.86	3.52	-10.89	
Mid-Cap	-48.14	23.14	26.38	12.69	-1.77	4.60	-1.20	7.27	-13.84	6.97	-4.86	
Small Cap	-53.25	22.41	24.55	17.13	-2.63	8.48	0.27	5.66	-13.58	9.35	-5.23	
	1999	2000		2002		2004		2006		2008		
Large Cap	-1.81	1.72	-0.69	-2.71	0.09	-7.65	11.40	-11.77	-6.43	-6.72	-32.15	5.62
Mid-Cap	-2.80	0.29	2.49	0.13	2.41	-4.13	11.91	-10.96	-6.22	-7.74	-34.48	16.19
Small Cap	-1.25	-0.69	2.83	-4.63	0.72	-4.50	14.70	-12.65	-9.42	-6.45	-33.06	20.56
	2010		2012		2014		2016		2018		2020	2021

Source: (Lynch, 2022)

Despite a narrowing of the margin in 2021, value investors continue to be at a disadvantage in the long run. During the previous ten years, small-value funds have behind small-growth funds by 92.6 percentage points.

For large-value investors, the disparity over the long run is much larger. Since 2012, large-value funds have fallen 173 percentage points behind large-growth funds.

Figure 7 5-Year Growth Performance



Source: (Lynch, 2022)

### Dividend vs Index investing

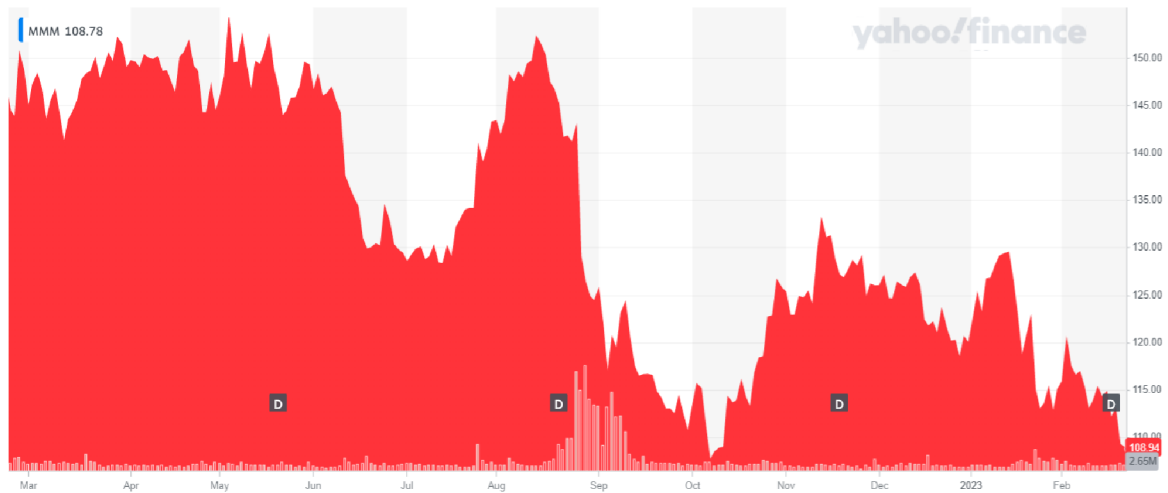
It is already known what is index investing and dividend investing and how do they work. There are some significant variations between them even though they are both a component of a long-term investing plan.

Buying companies (or funds) with high dividend yields is known as dividend investing. For instance, if a stock pays a 3% dividend, you would get a cash dividend equal to 3% of the amount you own each year.

Purchasing funds (ETFs or mutual funds) that track a certain index is the foundation of index investing (total market, global, sector funds, etc). Your return with an index fund ought to be quite comparable to the market.

The technology corporation 3M Co. produces consumer, industrial, and safety goods. It operates via the following divisions: Corporate and Unallocated, Health Care, Consumer, Transportation and Electronics, and Safety and Industrial.

Figure 8 3M chart



Source: (Yahoo finance, 2023)

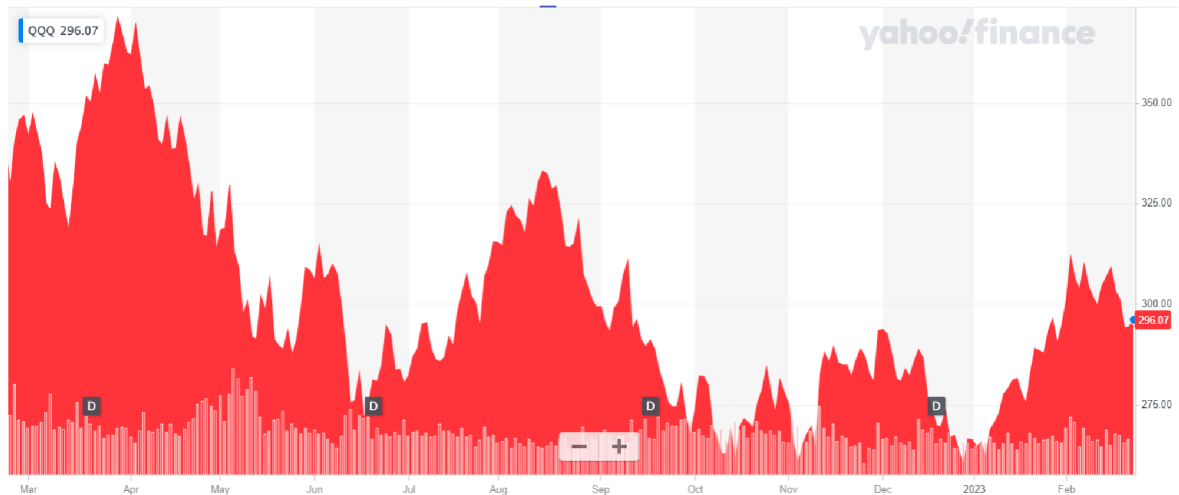
One of 3M's four operational segments is the company's consumer business group. Moreover, 3M's home improvement-related revenues, which totalled \$538 million in the fourth quarter, accounted for around 43% of the segment's overall sales.

Also, if there is a decline in investment in a sector that is susceptible to interest rates, such as housing, it may spill over into 3M's other important end market, the automobile industry. Three market sectors—consumer, transportation and electronics, and safety and industrial—combine to make up 3M's exposure to the automobile industry.

With organic sales in the consumer business group decreasing by low single digits to being flat in 2022, management's full-year estimate range is for a 3% decline in organic sales to be followed by a flat year. Moreover, management projected sales of \$7.2 billion to \$7.6 billion for the first quarter.

Apple, Google, Microsoft, and other companies are included in the exchange-traded fund known as Invesco QQQ, which follows the Nasdaq-100 Index™.

Figure 9 Invesco QQQ chart



Source: (Yahoo finance, 2023)

According to S&P Global Market Intelligence, the exchange-traded fund (ETF) for the Invesco QQQ Trust (QQQ 0.65%) completed the month of January up 10.6%. The ETF had a strong recovery month after falling 32.6% in 2022.

One of the most well-known ETFs in the world, the Invesco QQQ now manages \$156 billion in assets. The Nasdaq 100 is a fund that monitors the performance of the approximately 100 biggest stocks listed on the Nasdaq Stock Exchange, excluding financial equities.

The ETF, which has a significant technological component, is sometimes seen as the main indicator of how technology equities will perform. The information represents a 49% investment in the portfolio. With 16% of total market share, the consumer discretionary sector is the third biggest after healthcare (7%), consumer staples (6%), industrials (4%), utilities (1%), and energy (0.5%).

Apple (11.9% of the ETF's holdings), Microsoft (11.7%), and Amazon (6.7%) make up its top three holdings.

As a result, January ended up being a relatively excellent month for tech companies, with the Nasdaq Composite index rising 10.7%, its highest January since 2001. The QQQ performed well since the Nasdaq 100 gained almost the same proportion.

Stocks like Apple, which is up nearly 11% this month, Amazon, which is up about 22%, and Google, which is up about 12% year to date, were the Nasdaq's main drivers (YTD). Microsoft is up 3.3% YTD after exceeding expectations for its fourth-quarter earnings.

The market reacted favourably to tech equities due to a number of macroeconomic variables, including solid economic development—the fourth quarter's GDP increased by 2.9%—cooling inflation, low unemployment rates, and slowing wage increases, among other things.

The Invesco QQQ had a strong start to the year, but February will undoubtedly be an eventful month. The Federal Reserve raised interest rates by 25 basis points on February 1 to a range of 4.25% to 4.50%, which the market viewed favourably given that it is still slowing down its rate rises. The Fed reduced the rise to 50 basis points in December and now 25 basis points in February after four consecutive 75 basis point hikes. That happens when inflation rates gradually decline.

#### **4.5. Analysis of great investor success strategy**

Warren Buffett

The 90/10 investing approach advocated by Warren Buffett has the potential to provide greater returns for the investor than more cautious choices. As 90% of the portfolio is made up of the same concept funds, an investor using this method should concentrate on the quality of the index funds they purchase.

The 90/10 method is as follows: for an investment portfolio of \$100,000, \$90,000 should be placed in an S&P 500 index fund, and the remaining \$10,000 can be utilized to pay down one-year Treasury bonds that are expected to yield 4% yearly. The yearly yield may be computed using the S&P 500's performance as follows: if it increases by 10%, the yield will be 9.4%; if it decreases by 10%, the yield will be -8.6%.

It is significant to remember that the 90/10 approach can be modified according to an investor's level of investing risk tolerance. The 90/10 investment philosophy holds that stocks offer superior long-term returns than other safe investment choices like bonds or

savings accounts. Investors may take advantage of the potential profits from the stock market by designating 90% of their portfolio to the S&P 500 index fund. Government notes, which are thought to be less hazardous and offer a guaranteed return, make up the remaining 10% of the portfolio.

Investors should be aware that there are dangers involved in stock market investment, and that the short-term performance of the S&P 500 index fund might fluctuate. The 90/10 approach may not be appropriate for all investors, therefore before using this method, you should think about your risk appetite and financial objectives.

Investors should also consider the quality of the index funds they buy because these funds will make up the majority of their portfolio. To optimize returns on investment, it's critical to select funds with low cost ratios and high-quality assets.

John Templeton

Technical analysis is irrelevant for assessing the stock market, according to John Templeton. He proposes, instead, focusing on the basic examination and assessment of firm performance.

John Templeton's own guiding beliefs have helped him produce significant investing outcomes. His methods have benefited new investors and will continue to do so.

Templeton's investing philosophy is as follows:

1. Invest individually yet in a trend
2. Invest earnings back into new assets to generate more revenue
3. Hold assets for no more than seven years, but no less than six.
4. Purchase securities with a clear potential.
5. Investing diversification
6. To engage with global financial platforms and not be restricted to local investment while taking into account the degree to which the state regulates the economy.
7. Reduce costs wherever possible, including taxes.

Peter Lynch

"Invest in what you understand"

His investment approach is based on this statement by Peter Lynch. He made investments in businesses whose operations were evident to him. Instead of following trends, he sought out undervalued businesses that big investors hadn't yet noticed. Peter Lynch did not make an effort to forecast market trends, the status of the economy, or minute price changes. He always valued fundamental corporate metrics and businesses that offered promising goods and services.

Finding the company's market share was always the first stage in Peter Lynch's study. He had the opinion that the size of the company has a significant impact on the returns that an investor might expect. Big corporations like Coca-Cola and P&G will almost certainly not increase prices by a factor of two.

Finding small businesses with high-quality products that were undervalued by the market and potentially see considerable stock growth in the future was the cornerstone of his strategy. One remarkable example of one of these businesses is Amazon.com, Inc. A modest business that initially served the internet trading niche has seen its share price climb fifteen times in the last seven years, from \$256 to \$3295. (by 2021).

Figure 10 Amazon.com Inc. chart



Source : Own processing (2023)



## Principles for constructing portfolios

Growth stocks received the majority of his attention in the portfolio; they made up between 30% and 40% of the fund's assets. The remaining assets were divided among stocks in various categories, with 10–20% of assets invested in shares of firms with moderate growth to boost portfolio stability, 10–20% in shares of cyclical companies, and the remaining assets invested in businesses that were emerging from the crisis. It is crucial that 1% of the assets are consistently allocated to 500 secondary (potential) firms; Peter Lynch continually focused on them and maintained track of their health in order to determine whether to raise their percentage in the portfolio.

He never made an attempt to forecast market movement; instead, he trusted prospective businesses that shown growth throughout the market's development.

## 5. Result and Discussion

The study showed the light on the various types of investments and investment strategies used in financial markets. Following a thorough assessment of the literature and empirical data, the following significant results emerged:

**Types of Investments:** The study identified a number of different forms of investments, including stocks, bonds, mutual funds, real estate, and alternative investments including commodities and cryptocurrency. Each investment type has distinct features and risk-return profiles, catering to a wide range of investor preferences and goals.

**Investment Strategies:** Various investment strategies were investigated, ranging from passive strategies such as index investing and buy-and-hold approaches to active strategies such as value investing, growth investing, and momentum investing. Each strategy is distinguished by different methodologies and principles aimed at maximizing investment returns.

**Role of Investments in the Economy:** Investments play a crucial role in driving economic growth and development. Investments promote capital formation, innovation, and productivity gains by directing cash from savers to borrowers, so promoting economic activity and job creation.

One of the study's primary findings is the value of diversification and risk management in investment decision-making. Diversifying across asset classes, industries, and geographical locations can help reduce portfolio risk and increase long-term returns. Furthermore, risk management approaches such as asset allocation, rebalancing, and hedging strategies can help to protect investor wealth during volatile market situations.

The argument between active and passive investment strategies was carefully investigated. Active strategies strive to beat the market by actively selecting stocks and timing market movements, whereas passive strategies seek to replicate the performance of a benchmark index at a lower cost. The study discovered evidence supporting the usefulness of both techniques, with passive investing gaining popularity due to its simplicity, low fees, and potential for consistent returns.

The efficient market hypothesis (EMH) was discussed in the context of investment decision-making. According to EMH, stock prices incorporate all available information, making it difficult for investors to regularly beat the market. Behavioral biases, such as overconfidence, herd mentality, and loss aversion, can lead to absurd investment decisions that deviate from rational and efficient principles.

A rigorous investigation of the success tactics used by prominent investors Warren Buffett and Peter Lynch was done. Their investment philosophies, which emphasize fundamental analysis, long-term value investing, and disciplined decision-making, have consistently produced above-average returns over time. Their investment techniques yield useful insights for both individual and institutional investors. Warren Buffett, recognized for his value investing strategy that focuses on purchasing inexpensive firms with excellent fundamentals, emphasizes the necessity of long-term thinking and patience while investing. Peter Lynch, on the other hand, advocates for a bottom-up strategy to stock selection, emphasizing rigorous study, business knowledge, and the significance of remaining engaged in firms with great growth prospects.

For this purpose the conclusion is that investors should concentrate on discovering high-quality firms with durable competitive advantages and substantial growth potential, and then hold them for the long term to reap the benefits of compounding returns.

To reduce risk and maximize profits, diversify investing portfolio among asset classes, sectors, and geographical areas. To establish a balanced and robust portfolio, consider diversifying assets among stocks, bonds, real estate, and alternative investments. Avoid impulsive decisions driven by short-term market fluctuations or emotional reactions. Continuously learn about various investing strategies, risk management approaches, and behavioral biases in order to efficiently navigate the intricacies of financial markets. Of course, seek expert counsel from financial planners or investment specialists if needed.

## 6. Conclusion

Gaining money and making plans for the future may both be accomplished through investing. Understanding the numerous risks involved with investments is crucial in order to choose the one that will be most advantageous for one's particular goals and financial circumstances. Although it frequently seems complicated, investing need not be.

Individuals may gain a lot from wise investments that are catered to their requirements with enough study and awareness of the basics of investing. Before acting, it is important to conduct thorough study given the possible advantages from investing.

Stocks, bonds, mutual funds, real estate, commodities, ETFs, cryptocurrencies, NFTs, hedge funds, as well as investment strategies such as value, growth, momentum, index, dividend, and balanced investing, were all covered in detail. The benefits and drawbacks of each investment type and approach, as well as their risk and return profiles, were reviewed through academic literature, industry data, and expert comments.

The study's practical portion looked at investment objectives and risk tolerance, the relationship between risk and return, the value of diversification and asset allocation, the performance of various investment strategies, as well as the tactics of renowned investors like Warren Buffet, John Templeton, and Peter Lynch. According to the findings, people should make deliberate, mindful investments and carefully research the sorts of investments they intend to make.

It is crucial to remember that putting all of your money in one sort of investment is hazardous, thus it is recommended to diversify your portfolio by making two or three different types of investments. To succeed in investing, people should learn from investment experts and their investment techniques and base their choice of investment plan on their own requirements.

This study has important ramifications for both people and the investment sector. To reduce risk, investors should diversify their portfolio and be aware of the possible risks and rewards of various investment kinds and techniques. In addition to creating cutting-edge, easily accessible investment goods and services that meet a variety of client demands, the investment business should concentrate on providing enough education and counselling to investors.

The significance of investing deliberately and methodically, diversifying one's holdings, and selecting the best investment plan based on specific requirements was emphasized. Individuals may succeed in investing and create a secure financial future by adhering to these rules and learning from successful investors and investment experts.

## 7. References

Anon., 2022. *BlackRock*. [Online]  
Available at: <https://www.blackrock.com/us/individual/insights/60-40-portfolios-and-alternatives>  
[Accessed 26 December 2022].

Anon., 2022. *sketchbubble*. [Online]  
Available at: <https://www.sketchbubble.com/en/presentation-risk-return-relationship-model.html>  
[Accessed 16 February 2023].

Anon., 2023. *CoinGecko*. [Online]  
Available at: <https://www.coingecko.com/en/global-charts>  
[Accessed 22 February 2023].

Anon., 2023. *investing.com*. [Online]  
Available at: <https://www.investing.com/crypto/currencies>  
[Accessed 22 February 2023].

Anon., 2023. *Musclesatz*. [Online]  
Available at: <https://www.musclesatz.com/articles/bitcoin-past-present-future>  
[Accessed 26 December 2022].

Anon., 2023. *triple A*. [Online]  
Available at: <https://triple-a.io/crypto-ownership-data/>  
[Accessed 28 January 2023].

BANTON Caroline, 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/articles/trading/05/021605.asp>  
[Accessed 7 December 2022].

BEATTIE, A., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/ask/answers/08/first-company-issue-stock-dutch-east-india.asp>  
[Accessed 18 January 2023].

BOGLE, J. C., 2017. *The little book of common sense investing: the only way to guarantee your fair share of stock market returns*. 10th ed. Hoboken: John Wiley & Sons. ISBN 978-1-119-40450-7.

CHEN, J., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/f/futuresmarket.asp>  
[Accessed 5 December 2022].

CHEN, J., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/l/longterm.asp>  
[Accessed 7 December 2022].

- CHEN, J., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/e/etf.asp>  
[Accessed 8 November 2022].
- DANIAL, K., 2023. *Cryptocurrency investing for dummies*. 2nd ed. Hoboken: John Wiley & Sons, Inc. ISBN 978-1-119-98914-1.
- EUGENE Fama F., K. F. R., 1993. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), pp. 3-56.
- EVANS, R. E., 1999. *Earn more (sleep better): The index fund solution*. New York: Simon and Schuster. ISBN 978-0-684-85250-8.
- FERGUSON, N., 2008. *The Ascent of Money: A Financial History of the World*. 10th Anniversary Edition ed. s.l.:Penguin ISBN 9781440654022.
- FERNANDO, J., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/b/balancedinvestmentstrategy.asp>  
[Accessed 18 January 2023].
- FRANKENFIELD, J., 2023. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/c/cryptocurrency.asp>  
[Accessed 1 February 2023].
- Fund, I. E., 2018. *getsmarteraboutmanry*. [Online]  
Available at: <https://www.getsmarteraboutmoney.ca/wp-content/uploads/2018/02/infographic-Risk-and-diversification.pdf>  
[Accessed 20 February 2023].
- G. R. JENSEN, C. P. J., 2019. *Investments: Analysis and Management*. 14th ed. s.l.:John Wiley & Sons ISBN 9781119578079.
- GRAHAM Benjamin, Z. J. B. W. E., 2016. *The Intelligent Investor*. s.l.:HarperCollins Publishers Inc. ISBN 0-06-058328-2.
- GRAHAM, B. a. D. D. L. F. a. C. S. a. o., 1934. *Security analysis*. 1st ed. s.l.:McGraw-Hill New York. ISBN 978-0-070-24496-2.
- GREENWALD, B. C. a. K. J. a. B. E. a. C. M. A. a. S. T., 2020. *Value investing: from Graham to Buffett and beyond*. 2nd ed. Hoboken: John Wiley & Sons, Inc. ISBN 978-1-118-23381-8.
- Harvard Joint Center for Housing Studies, 2021. *The State of the Nation's Housing*, s.l.: Harvard Joint Center for Housing Studies.
- HASLEM, J. A., 2009. *Mutual Funds: Portfolio Structures, Analysis, Management, and Stewardship*. s.l.:John Wiley & Sons ISBN 9780470499092.
- HAYES, A., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/c/commodityfuturescontract.asp>  
[Accessed 6 December 2022].

- HAYES, A., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/terms/b/blockchain.asp>  
[Accessed 26 November 2022].
- Internal Revenue Service, 2022. *IRS*. [Online]  
Available at: <https://www.irs.gov/publications/p587>  
[Accessed 12 November 2022].
- JEGADEESH, N. a. T. S., 1993. Returns to buying winners and selling losers: Implications for stock market efficiency. *The Journal of finance*, 48(1), pp. 65--91.
- KIBET Amos, E. R. B. D. G., 2019. *BLOCKCHAIN: IT'S STRUCTURE, PRINCIPLES, APPLICATIONS AND FORESEEN ISSUES.*, Angeles: JETIR.
- LHABITANT, F.-S., 2007. *Handbook of Hedge Funds*. Chichester: John Wiley & Sons, Inc. ISBN 978-0-470-02663-2.
- LYNCH, K., 2022. *Morningstar*. [Online]  
Available at: <https://www.morningstar.com/articles/1074136/value-vs-growth-funds-values-revival-is-uneven>  
[Accessed 15 February 2023].
- MALKIEL, B. G., 2003. *A random walk down Wall Street*. New York: W. W. Norton & Company, Inc ISBN 978-0-393-24895-1.
- MALLABY, S., 2010. *More Money Than God: Hedge Funds and the Making of the New Elite*. s.l.:A&C Black ISBN 9781408816813.
- MENEZES Alfred J., V. S. A., 1991. *Advances in Cryptology - CRYPTO '90*. 1st ed. Heidelberg: Springer Berlin. ISBN 978-3-540-38424-3.
- MOSKOWITZ, T. J. a. G. M., 1999. Do industries explain momentum?. *The Journal of finance*, 54(4), pp. 1249--1290.
- MURPHY, C. B., 2022. *Investopedia*. [Online]  
Available at: <https://www.investopedia.com/ask/answers/012815/what-difference-between-tangible-and-intangible-assets.asp>  
[Accessed 26 November 2022].
- NATIONAL ASSOCIATION OF REALTORS®, 2021. *Expectations & Market Realities in Real Estate 2021*, Chicago: Deloitte Development LLC, NATIONAL ASSOCIATION OF REALTORS®, RERC, SitusAMC.
- Peter LYNCH, J. R., 2000. *One Up On Wall Street*. s.l.:Simon and Schuster ISBN 9780743200400.
- PINO, I., 2022. *Fortune*. [Online]  
Available at: <https://fortune.com/recommends/investing/what-are-commodities/>  
[Accessed 9 November 2022].
- S. HOMER, R. E. S., 1996. *A History of Interest Rates*. s.l.:Rutgers University Press ISBN 9780813522883.



S.H CHAN, J. E. K. W., 2003. *Real Estate Investment Trusts: Structure, Performance, and Investment Opportunities*. s.l.:Oxford University Press ISBN 9780195155341.

SEGAL, T., 2021. *Investopedia*. [Online]

Available at: <https://www.investopedia.com/terms/g/growthinvesting.asp>

[Accessed 16 December 2022].

SEGAL, T., 2022. *Investopedia*. [Online]

Available at: [https://www.investopedia.com/terms/m/momentum\\_investing.asp](https://www.investopedia.com/terms/m/momentum_investing.asp)

[Accessed 8 January 2023].

SEGAL, T., 2022. *Investopedia*. [Online]

Available at: <https://www.investopedia.com/ask/answers/040715/there-positive-correlation-between-risk-and-return.asp>

[Accessed 19 February 2023].

SWENSON, S., 2022. *fool*. [Online]

Available at: <https://www.fool.com/investing/how-to-invest/risk-tolerance/>

[Accessed 15 February 2023].

TEALL, J., 2022. *Financial Trading and Investing*. 2nd ed. Rome: Academic Press. ISBN 978-0-128-11117-8.

VERONESI, P., 2010. *Fixed Income Securities: Valuation, Risk, and Risk Management*. s.l.:John Wiley & Sons ISBN 9780470109106.

WILSON, R. C., 2011. *The Hedge Fund Book: A Training Manual for Professionals and Capital-Raising Executives*. Hoboken: John Wiley & Sons, Inc. ISBN 978-1-118-10797-3.

Yahoo finance, 2023. *Yahoofinance*. [Online]

Available at:

<https://finance.yahoo.com/quote/MMM/chart?p=MMM#eyJpbnRlcnZhbCI6ImRheSIsInBlcmlyZGIjaXR5IjoxLCJ0aW1lVW5pdCI6bnVsbCwiY2FuZGx1V2lkdGgiOjQuNTIzODA5NTIzODA5NTI0LCJmbG1wcGVkIjpmYWxzZSwidm9sdW1lVW5kZXJsYXkiOnRydWUsImFkaiI6dHJlZSwiY3Jvc3NoYWlyIjp0cnVILCJjaGFydFR>

[Accessed 23 February 2023].

Yahoo finance, 2023. *Yahoofinance*. [Online]

Available at: <https://finance.yahoo.com/quote/QQQ?p=QQQ&.tsrc=fin-srch>

[Accessed 23 February 2023].

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