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INVESTMENT DECISION ANALYSIS: ASSESSMENT OF INVESTMENT RISK CRITERIA AND MEASUREMENT

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Abstract

Criteria assessment and risk measurement are key elements in an effective investment decision-making process. These two aspects complement each other and provide a strong foundation for making rational, balanced investment decisions that are in line with the company's strategic objectives. Investment criteria assessment includes factors such as potential returns, liquidity, duration, and alignment with the company's strategic objectives. Criteria assessment provides a strong basis for evaluating the feasibility of an investment, while risk measurement ensures that the risks taken can be managed in accordance with the company's risk tolerance. The combination of these two approaches allows companies to make more rational, balanced investment decisions that support sustainable growth. Effective implementation of criteria assessment and risk measurement has a positive impact on financial performance, increasing return on investment, maintaining financial stability, and strengthening stakeholder trust. This study contributes to a deeper understanding of the importance of criteria assessment and risk measurement in investment decision-making, as well as providing practical guidance for companies in improving the quality of their investment decisions amidst the ever-evolving market dynamics.

Keywords: Analysis, investment decisions, criteria assessment, investment risk measurement

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INTRODUCTION

In an increasingly competitive business world, investment decisions are one of the key factors that determine the success of a company. Research on investment decision analysis, especially in the context of risk assessment criteria and measurement, is very important to help investors and financial managers make the right decisions. Good investment decisions not only focus on potential profits, but must also consider the risks that may be faced. Investments made without in-depth analysis can result in significant losses. In the world of finance, investment decisions are one of the most critical aspects faced by individuals, companies, and financial institutions. These decisions involve the allocation of limited resources with the aim of achieving maximum profits while minimizing the risks involved. However, the complexity of the ever-growing financial market, coupled with global economic uncertainty, makes investment decision analysis increasingly complex and requires a more structured and data-driven approach. According to Jenkins, G. P., & Harberger, A. C. (2018) investment decision analysis is an integral part of financial management that focuses on the assessment and selection of projects or assets to be invested in. Investment decision analysis is a complex but crucial process for the success of a company. With a systematic approach and proper methodology, companies can make better decisions in allocating resources and achieving long-term financial goals. The background of this analysis is very important to understand how companies can allocate resources efficiently and effectively. Investment decisions have a long-term impact on the growth and sustainability of the company (Rahman, M., & Gan, 2020). In this context, investment does not only include capital investment in the form of purchasing fixed assets, but also includes new product development, market expansion, and technological innovation.

Puška et al., (2018) stated that one of the main challenges in investment decision analysis is the uncertainty inherent in cash flow projections and market conditions. External factors such as economic changes, regulations, and competition can affect investment outcomes. Therefore, it is important to conduct sensitivity and scenario analysis to understand how changes in assumptions can affect investment decisions. Overall, investment decision analysis is a complex but crucial process for the success of a company (Madaan, G., & Singh, 2019). With a systematic approach and proper methodology, companies can make better decisions in allocating resources and achieving long-term financial goals. Therefore, it is important for investors to understand the various investment assessment methods available, such as Net Present

Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI). These methods provide a systematic framework for evaluating the viability of investment projects and help in making more informed decisions (Merková, M., & Drábek, J. (2015).

Investment criteria assessment includes various factors such as financial goals, potential returns, associated risks, liquidity, and investment horizon. Each of these criteria plays a vital role in determining whether an investment is suitable for an investor's profile and objectives (Hsu, 2014). In recent decades, financial markets have become more dynamic and complex, with the emergence of various new financial instruments, such as derivatives, mutual funds, and digital assets such as cryptocurrencies. This condition adds to the challenge in conducting a comprehensive criteria assessment.

According to Vladimirovna, E. O. (2019) investments that are not based on solid criteria assessments can lead to suboptimal decisions, where investors may face unanticipated risks or fail to achieve their expected financial goals. Therefore, this study aims to explore how criteria assessments can be optimized in the investment decision-making process, with a particular focus on the most relevant factors in today's financial markets. In addition, measuring investment risk is an equally important aspect. Risks can originate from a number of factors, such as shifts in the market, modifications to regulations, and unstable economic conditions. In the context of globalization and market digitalization, risk sources are increasingly diverse and complex. For example, the development of financial technology and increasingly globally integrated capital markets increases the risk of volatility and regulatory uncertainty. In addition, the global financial crisis, such as that which occurred in 2008, has shown how important it is to have a deep understanding of systemic risk and interconnectivity between markets (Zholonko et al., 2021).

This study departs from the need to develop and apply more sophisticated and adaptive methods in measuring investment risk. With a more accurate risk measurement method, investors are expected to better manage their portfolios and make more educated decisions in the face of market uncertainty. By understanding and measuring risk, investors can develop effective mitigation strategies, thereby minimizing potential losses and maximizing returns. This study aims to explore how risk assessment and measurement criteria can be integrated into the process of making investment decisions. This study will address how suitable investment criteria can assist investors in reaching their financial objectives in this scenario. Investors can eventually contribute to the long-term success of the company by making wiser

and more informed judgments if they have a better awareness of the criteria and risks. Overall, the background of this study emphasizes the importance of a comprehensive investment decision analysis, which considers not only potential returns but also associated risks, to achieve optimal investment results.

RESEARCH METHOD

This study uses a descriptive method by collecting data from various reliable sources, including literature studies and recent publications. The descriptive approach is used to describe investment decisions in assessing criteria and measuring investment risk comprehensively. The first stage in this research method is collecting literature relevant to the research topic. A literature search is conducted through academic databases, scientific journals, and related publications that discuss how investment decisions are made in assessing criteria and measuring investment risk. The selected literature must be of good quality and relevant to the research objectives. After collecting the literature, an analysis and synthesis of the information found is carried out. Relevant data and information on the definition, basis, stages, and tips for analyzing investment decisions, types of assessment criteria and measurement of investment risk, the relationship between investment decisions and assessment criteria and investment risk, the role of assessment criteria and measurement of investment risk in the business world related to the research topic.

RESULT AND DISCUSSION

Definition, Basics, Stages, and Tips for Investment Decision Analysis

Raut, R. K. (2020) stated that investment decision analysis is a process used In order to decide if an investment is worthwhile, based on an evaluation of various factors that affect the potential profit and risk of the investment. This process is very important for investors, both individuals and institutions, to ensure that the decisions taken will support the achievement of their financial goals. Investment decision analysis is the process of evaluating and selecting investment alternatives based on financial goals, potential profits, risks involved, and current market conditions. This process involves collecting data, analyzing information, and assessing criteria to make informed decisions about the allocation of financial resources in the form of investments.

According to Goyal, K., & Kumar, S. (2021) the basis of investment decision analysis includes several fundamental concepts and principles:

Time Value of Money: According to this theory, because of the potential income that can be produced from money, it is worth more now than it will be in the future. For this reason, figuring out the internal rate of return (IRR) and net present value (NPV) is a common step in investment analysis.
Risk and Return Trade-Off: Every investment has a relationship between the two: risk and return. The risk involved increases with the potential profit. Analyzing investment decisions can assist in determining the ideal ratio of return to risk. The notion of diversification is distributing investments among several assets or industries in order to mitigate risk.
Diversification helps protect a portfolio from large losses that may occur if one type of investment underperforms.
Market Efficiency: This hypothesis states that asset prices in the market reflect all available information. Therefore, investment analysis must consider market efficiency when assessing asset prices and potential returns.

The investment decision analysis process usually involves several structured stages (Qiu et al., 2020):

1. Identify Investment Objectives
   The first step is to establish the financial goals you want to achieve, such as capital growth, fixed income, or capital protection. This goal will guide the entire analysis process.
2. Collecting Data and Information
   Collecting data related to potential investments, including historical performance, market prospects, economic conditions, and other financial information. This data forms the basis for conducting an in-depth analysis.
3. Evaluating Investment Criteria
   Assessing various criteria such as ROI, risk, liquidity, time horizon, and tax impact. This involves the use of analytical tools such as NPV, IRR, and other financial ratios.
4. Risk Measurement and Management
   Identifying and quantifying the risks involved in an investment. Tools such as standard deviation, beta, VaR, and stress testing are used to understand the potential downside and volatility.
5. Investment Alternative Analysis
   Comparing various investment alternatives to determine which best suits the investor's objectives and risk profile. This often involves scenario simulations or sensitivity analysis.

6. Decision Making
   Based on the criteria and risk analysis, the investor makes a decision whether or not to proceed with the investment. This decision should be supported by data and strategic considerations.
7. Implementation and Monitoring
   Once the decision is made, the investment is implemented and its performance is monitored periodically. Adjustments may be made if there are changes in market conditions or investment objectives.

Here are some tips that can help in conducting effective investment decision analysis according to research by Jamwal et al., 2021):

1. Set Clear Goals
   Make sure the investment goals are clear and specific. Clear goals will guide the decision-making process.
2. Diversify
   Don't put all your funds in one type of investment. Spread the risk by diversifying your portfolio into various assets or sectors.
3. Use the Right Analysis Tools
   Utilize financial analysis tools such as NPV, IRR, and other financial ratios to evaluate potential returns and risks. These tools help give a more realistic impression of an investment's worth.
4. Take Risk Seriously
   Risk is part of every investment. Make sure you understand the risks involved and have a strategy to manage or mitigate them, such as stop-loss orders or hedging.
5. Stay Informed
   The global financial and economic markets are constantly changing. Always update your knowledge with the latest market news, economic reports, and investment trends.
6. Evaluate Performance Regularly
   Monitor investment performance regularly. This allows for necessary adjustments if investments do not go as planned.
7. Avoid Emotional Decisions
   Make decisions based on data and analysis, not emotions or speculation. The market can be very volatile, and decisions based on emotions can lead to losses.

Types of Investment Risk Assessment Criteria and Measurement

Investment risk assessment and measurement criteria according to Ganin et al., (2020) is an important process in portfolio management and

investment decision making. Investment criteria assessment refers to the evaluation of certain factors used to determine whether an investment is in accordance with objectives, risk appetite, and investment approach of an individual. In the world of investment, risk assessment and measurement criteria are very important to help investors make the right decisions. The following is an explanation of the types of investment risk assessment and measurement criteria according to Kandasamy et al., (2020). Here are some of the main criteria:

Return on Investment (ROI): Measures how effectively an investment generates profits compared to the cost of investment. A high ROI tends to be a good indicator of a successful investment.

Risk Tolerance: This measures the extent to which an investor is willing to take risks. Conservative investors may choose low-risk investments, while aggressive investors may look for opportunities with high potential returns despite the high risk.

Liquidity: Liquidity refers to how easily an asset can be sold or converted into cash without losing value. Liquid investments are preferred by investors who may need quick access to their funds.

Diversification: Assesses how well an investment is diversified to reduce risk. Diversification helps spread out risk so that losses in one area do not have a large impact on the overall portfolio.

Chen et al., (2021) investment risk measurement is an evaluation of the potential loss that may occur from an investment. Some common methods used to measure investment risk include:

Volatility (Standard Deviation): Measures the degree to which an asset's price fluctuates over time. Elevated fluctuations suggest greater risk, as asset prices tend to fluctuate significantly.

Value at Risk (VaR): VaR estimates the maximum potential loss from an investment over a given period at a given confidence level. For example, a VaR of 5% over a single day might indicate that there is a 5% chance an investor will lose more than a certain amount in a single day.

Beta: The sensitivity of an asset to changes in the wider market is measured by its beta. When an asset's beta is more than 1, it suggests that it is typically more volatile than the market; when it is lower than 1, it suggests that it is typically less volatile. The return generated per unit of risk is measured by the Sharpe Ratio. This makes it easier for investors to determine if the profits on their investments match the risk they have assumed.

Stress Testing: This is a risk measurement method used to evaluate how an investment will behave in extreme or unexpected market scenarios. Stress testing helps investors understand the potential losses in adverse market conditions.

In addition to the measurement methods above, there are also several types of risks that must be considered in assessing investment risk (Popescu et al., 2021):

Market Risk: The risk associated with overall market movements, which can be influenced by economic factors, politics, and other global events.

Liquidity Risk: The risk that arises when investors cannot sell their investments quickly without damaging the market value.

Credit Risk: The risk that the debtor is unable to repay the loan or bond they have issued.

Inflation RiskThe chance that, over time, inflation will reduce the value of an investment, especially for investments with fixed returns.

Interest rate risk is the potential negative impact on the value of bonds and other fixed income instruments due to fluctuations in interest rates instruments.

By understanding and applying these criteria and measurement criteria for investment risk, investors can make wiser investment decisions that are in line with their financial goals.

Relationship between Investment Decisions and Investment Risk and Criteria Assessment

The relationship between investment decisions and criteria assessment and risk measurement is very close and mutually supportive. Criteria assessment provides guidance on the feasibility and potential returns of an investment, while risk measurement ensures that the risks involved are manageable and in accordance with the investor's risk tolerance (Olayinka, 2022). Investment decisions made by considering these two factors will have more potential to generate optimal returns and protect against unwanted losses. Investment decisions are closely related to the assessment of investment criteria and risk, because these two factors form the main basis for every decision taken by investors or financial managers.

Investment criteria assessment covers various aspects used to evaluate the feasibility of an investment. These criteria include return on investment (ROI), growth potential, liquidity, investment duration, and alignment with the company's strategic objectives. Criteria assessment helps investors filter investment options that best suit their goals. For example, companies seeking

long-term growth will focus on investments with high growth potential even though their liquidity is low (Park, S. R., & Jang, 2021). Conversely, companies that require high liquidity will prefer investments that are easily liquidated even though the returns are lower. By using clear and measurable criteria, investors can make more rational decisions. For example, if an investment offers a high ROI but does not match the company's risk profile, assessing these criteria will prevent excessive risky decisions.

Adil et al., (2022) stated that risk measurement plays an important role in determining how much risk is acceptable in investment decisions. This measurement includes various methods such as Value at Risk (VaR), standard deviation (volatility), and Beta. Every investor or company has a different risk tolerance. Risk measurement allows them to understand how much risk is involved in a particular investment and whether the risk is in accordance with their tolerance. Investment decisions will be influenced by the extent to which the investment is in accordance with the established risk tolerance. Risk measurement not only helps in initial decision making but also in managing investments after the decision is made. If an investment shows signs of increasing risk, management can take steps to reduce exposure or implement hedging strategies to protect the portfolio.

Criteria assessment and risk measurement are inseparable in the investment decision-making process. Both work synergistically to provide a comprehensive view of the potential returns and risks associated with an investment. Criteria assessment provides insight into potential gains, while risk measurement assesses potential losses. Good investment decisions are based on a balance between these two factors. For example, an investment with a high ROI may not be worth considering if the risk involved is too great for the company to tolerate. The combination of criteria assessment and risk measurement allows companies to optimize their investment portfolios. By selecting investments that fit the criteria and have measurable risks, companies can build a balanced and profitable portfolio (Dong et al., 2021).

Investment decisions made based on sound criteria assessment and accurate risk measurement tend to yield more positive outcomes. This can include increased returns, better risk management, and achievement of the company’s strategic objectives. By carefully assessing criteria and measuring risk accurately, investors can select investments that offer optimal returns at an acceptable level of risk. This helps in increasing the overall value of the portfolio. Proper risk measurement allows investors to anticipate potential losses and take mitigating actions before they materialize. This is crucial in

maintaining the financial stability of the company. Investment decisions are also influenced by external factors such as macroeconomic conditions, regulatory changes, and market dynamics.

Criteria assessment and risk measurement should take these factors into account to ensure that investment decisions remain relevant in the broader context. Criteria assessment and risk measurement allow companies to adjust their investment strategies according to changing market conditions (Karatop et al., 2021). For example, in volatile market situations, companies may be more conservative in taking risks. External factors that are difficult to control, such as a global economic crisis, can increase investment risk. In these situations, risk measurement helps companies manage their exposure to these risks and adjust their portfolios if necessary.

The Role of Investment Risk Assessment Criteria and Measurement in the Business World

Investment criteria assessments, such as ROI, liquidity, and diversification, help businesses filter investment options that best align with their short-term and long-term goals. These criteria allow management to focus on investments that align with the company's strategy, speed up decision-making, and avoid inappropriate investments. By using clear assessment criteria, businesses can Give resources (money, time, and other resources) to ventures or investments with the best chance of success with controlled risk (Van Greuning, H., & Bratanovic, 2020).

Oudat, M. S., & Ali, B. J. (2021) stated that each company has a different risk tolerance, depending on factors such as company size, market conditions, and financial goals. Criteria assessments help companies adjust their investment portfolios to match their desired risk profile. Risk measures, such as volatility, VaR, and stress testing, provide a clearer view of the potential losses that a business may experience. By understanding and measuring these risks, companies can take preventive measures to reduce the negative impact on their portfolios. Effective risk measurement can increase transparency and stakeholder confidence (such as investors, shareholders, and creditors) in the company's ability to manage investments. This is important for maintaining the company's reputation and attracting additional investment.

Data obtained from risk measurement can be used to make better and more informed decisions Lee, I. (2021). For example, if an investment is highly volatile, management may decide to reduce exposure or seek more stable options. Proper assessment and good risk management can positively affect

ROI. By selecting appropriate investments and managing risk carefully, companies can improve their overall return on investment.

This research could include case study analysis of companies that have successfully used criteria assessment and risk measurement in their investments. These case studies could show best practices and lessons learned from past mistakes. In the digital era, many companies are starting to use technologies such as big data, artificial intelligence (AI), and machine learning to improve risk assessment and investment decisions. Research could explore how these technologies are implemented and their impact on the accuracy and speed of decision making.

The findings of this research could help management develop more solid investment policies, based on rigorous criteria assessment and comprehensive risk measurement. This research can also highlight the importance of training investment managers in understanding and applying the principles of risk assessment criteria and measurement, and how this contributes to the achievement of the company's strategic objectives.

CONCLUSION

Criteria assessment and risk measurement are key elements in an effective investment decision-making process. These two aspects complement each other and provide a strong foundation for making rational, balanced investment decisions that align with the strategic goals of the organization. Investors can examine a project's viability with clarity using investment assessment techniques including Profitability Index (PI), Internal Rate of Return (IRR), and Net Present Value (NPV). Utilizing these standards, investors can measure the expected returns and compare them with the costs incurred.

This helps while judging the value of an investment implementing or not. In addition to criteria assessment, investment risk measurement is also very important. Investors need to identify and analyze the various risks that may be faced, such as market risk, operational risk, and financial risk. Knowing these dangers, investors can take appropriate mitigation steps, thereby minimizing potential losses and increasing the chances of investment success. Overall, the combination of criteria assessment and risk measurement provides a strong foundation for investors to make smarter and more informed decisions. With a systematic approach, companies can increase the value of their investments and achieve their desired financial goals.

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