| RESEARCH ARTICLE

Hedging And De-Hedge Strategy Analysis For Optimal Risk Management In Banking

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| ABSTRACT

Hedging is a financial instrument that uses a risk management approach to neutralize systematic risk against changes in prices or cash flows: individuals and businesses. One alternative that can be done to minimize this risk of banking is hedging. [1]. De-hedge means removing an existing position that serves as a hedge against the main position in the market. This study analyzes hedging strategies to achieve optimal risk management in banking companies. The object of the study is the banking industry, both conventional and sharia, listed on the IDX with an observation period of 2019-2023. The targeted outputs are scientific publications and national journals. The results of the study are Hedging strategies: Forward Contract, Futures Contract, and Money Market. Hedging strategy implementation techniques are Arbitrage, Diversification, Average down, Cash closing. Steps in how hedging works: the development of commodity prices in the physical market and futures market is studied and calculated, calculation of operating costs including storage costs, insurance costs, and interest expenses, fundamental/technical market analysis to see price movements, calculating physical and futures markets studying other sources of information so that the losses incurred are not too large, liquidation is carried out. To mitigate the risk of financial asset movements such as exchange rates, avoid the risk of loss, reduce the influence of foreign exchange rate fluctuations, and stabilize the overall financial situation, hedging and de-hedging are optional solution to optimizing risk management for banking.

| KEYWORDS

Banking; Hedging; De-Hedging; Risk Management

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I. INTRODUCTION

As a result of the uncertain global economic situation after the recent pandemic, the national economy has declined drastically. The same thing is also experienced by the national financial services industry. However, The Financial Services Authority or Otoritas Jasa Keuangan (OJK) responded to this quickly, through effective policies that have proven to be able to make the financial services sector survive amid a crisis, stable, and able to turn around. OJK analyzed that five challenges will be faced by banking, Crisis Policy, Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) against Global Supply Chain Uncertainty. Policy, Volatile Inflation, High Interest Rates, Economic Slowdown, Increased Energy Prices. Technological developments. Banking operations aimed at sustainability.

Eight State-Owned Enterprises (BUMN) utilized hedging facilities from three state-owned banks worth US$1.92 billion. The hedging facility was used to mitigate financial risks due to exchange rate volatility. The eight BUMNs are PT Pupuk Indonesia, PT Perusahaan Gas Negara (PGN) Tbk, Badan Urusan Logistik (Bulog), PT Pelabuhan Indonesia II (Pelindo II), PT Pelabuhan Indonesia III (Pelindo III), Perum Peruri, PT Aneka Tambang Tbk, and PT Semen Baturaja. The BUMN banks providing hedging facilities include PT Bank Rakyat Indonesia (BRI) Tbk worth US$750 million, PT Bank Negara Indonesia (BNI) Tbk worth US$619 million, and PT Bank Mandiri Tbk worth US$555 million. Previously, hedging contracts were also carried out by PT Perusahaan Listrik Negara (PLN) worth US$950 million and PT Pertamina worth US$2.5 billion. Minister of SOEs Rini Soemarno assessed that hedging is the right decision taken by SOEs amidst the current uncertainty in the money market. With hedging, she hopes that companies will be able to maintain healthy cash flow even though the exchange rate fluctuates. SOE companies must manage their risks prudently, both for their management and their finances. Governor of Bank Indonesia also encouraged the banking sector to increase the development of derivative products for hedging purposes. He said that increasing hedging can ultimately support macroeconomic stability and the achievement of sustainable economic growth. Companies that can manage risk well and continue to create value by increasing the company will make the financial market more efficient because good companies support a more developed and healthy money market.

Bank Indonesia noted that over the past five years, the number of hedging transactions has increased. This is reflected in the increase in the portion of derivative transactions in the domestic foreign exchange market compared to total foreign exchange transactions which reached 40 percent in 2016, compared to 35 percent in 2015. For companies that have foreign exchange risks, we do not recommend that all foreign exchange transactions be done on the spot.

Internal and external factors of banking risk are as follows: (1) Internal factors: Risks originating from within the company itself. (2) External factors: Risks originating from outside the company or the environment outside the company. Some examples of external risks that can occur in banking are Natural disasters, Riots, War, Economic crises, and Political changes. External risks are often referred to as "Black Swans" which have low predictability and high impact. This risk can expose the company to things that cannot be controlled or predicted. These risks can be anything from natural disasters that disrupt a company's shipping process to political changes that limit how a company can operate. Some of these types of risks can be classified on their own.

Several types of risks are present in the banking sector, including credit risk, market risk, liquidity risk, operational risk, legal risk, reputational risk, strategic risk, and compliance risk. To safeguard assets from uncertain price fluctuations in futures trading, banks can utilize derivative instruments through hedging. Foreign exchange derivatives, such as credit derivatives, allow institutions to structure portfolios that help manage and transfer risk effectively [2].

Hedging is a risk management approach aimed at reducing potential losses in investments by taking an offsetting position in a related asset. While hedging helps mitigate risk, it also tends to limit potential gains. The cost associated with hedging, commonly referred to as the premium, represents the price paid for the protection it offers.

De-hedge means removing an existing position that serves as a hedge against the main position in the market. Hedging involves taking an offsetting position or limiting losses to the main position to reduce risk. De-hedging is a strategy to close a hedge position that has been created. De-hedging can be done all at once or in stages. The problem studied is how the hedging strategy is carried out in banking for optimal risk management.

The purpose of this study is to determine hedging strategies to achieve optimal risk management. The urgency of the study is to provide benefits for (1) banking to carry out optimal risk management through hedging strategies to be highly competitive in the current era (2) the government, as a consideration/input in making policies (3) the community, additional information, and financial decisions in choosing a bank. Banking risk management is a series of procedures and methodologies used to identify, measure, monitor, and control risks arising from banking business activities. Banking risk management aims to anticipate unwanted things from banking financial services.

Risk Management in Banking

The implementation of banking risk management is expected to minimize possible losses. Several things that need to be considered in banking risk management, including, consent management, namely the consent of the customer, and the customer can terminate his/her consent; Data management, namely the data flow that occurs and who can access it; and security risk, namely the process of mitigating and handling security incidents

Risk management is an essential practice for all participants in the financial services ecosystem, including investment banks, retail banks, and insurance companies [3]. Effective risk management in banking provides several key benefits, including:

a) Financial Stability – Proper risk management helps banks maintain financial stability by identifying, assessing, and mitigating potential threats that could lead to financial losses.
b) Regulatory Compliance – Adhering to regulations ensures that banks avoid legal penalties, lawsuits, and reputational harm, which could negatively impact business operations.
c) Reputation Management – A damaged reputation can result in significant consequences, such as loss of customers and revenue. Banks must establish robust risk management frameworks and continuous monitoring systems to minimize risks and safeguard their reputation.
d) Customer Protection – Strong risk management practices also help banks protect customers from threats such as fraud and identity theft [3].

The word "hedge" comes from a verb meaning to create a physical boundary or to guard land with a fence. The phrase "to hedge a bet" first appeared in a 1672 satire play. The phrase meant someone who hedges his bets by making an offsetting bet to protect himself from loss. Meanwhile, modern hedging in the United States began with the founding of the Chicago Board of Trade in 1848. Other exchanges also developed similar concepts for other commodity needs, such as the London Metals Exchange which traded copper.

How to mitigate risk or protect the value position of an asset or liability for future interest rate and currency fluctuation risks with other parties is the definition of hedging. In addition, reducing interest expenses and principal debt obligations from the volatility of financial market factors is the benefit of hedging. (Minister of Finance Regulation Number 12/PMK.08/2013). For companies that operate and regularly carry out transactions involving interest rates or exchange rates (exposure), hedging can be used [4]. Banking must implement an optimal management strategy so that the risks faced can be controlled properly. Risk is an uncertainty that occurs due to a worsening level of profitability or even causes losses. The higher the level of uncertainty, the higher the risk [5].

De-hedging is another strategy for optimizing risk management in banking. It involves removing or reducing a hedge position under specific conditions, such as when the hedge is no longer necessary, the cost of maintaining the hedge is too high, or when an entity decides to take on additional risk by leaving a position unhedged. De-hedging can be executed in two primary ways: lump sum de-hedging, where the entire hedge is removed in a single transaction, or gradual de-hedging, where the hedge is reduced incrementally over time.

Hedging, on the other hand, is a risk management strategy designed to minimize potential losses in investments or trading. It involves taking an offsetting position to protect against adverse price movements. For example, purchasing a put option on a stock allows the holder to sell the stock at a predetermined price, regardless of its market value, thereby limiting potential losses. Another common hedging strategy is diversifying a portfolio across various asset classes, such as stocks and gold, to reduce exposure to any single asset's volatility.

There are numerous hedging strategies available to investors and institutions, including trading haven assets, asset allocation, using derivatives, pairs trading, arbitrage, spread hedging, averaging down, delta hedging, investing in hedge funds, and even staying in cash. Each of these strategies serves to mitigate risk in different ways, depending on the specific financial goals and market conditions. By carefully selecting and implementing these strategies, banks and investors can better manage risk and protect their portfolios from unexpected market fluctuations.

Hedge accounting begins with the general ledger, where investments and their associated hedges are recorded using a credit-debit system, like revenues and expenses. This financial data is then transferred to the income statement and used in the preparation of a balance sheet.

The concept of hedge funds can be traced back to 1949, when Alfred Winslow Jones pioneered the first hedge fund strategy. Jones sought to mitigate investment risks by diversifying beyond a single stock and reducing exposure to price fluctuations driven by market influences.

Several hedging strategies are commonly employed to manage financial risk, including:

a) Buying Hedge (Long Hedge): A strategy used to protect asset value by purchasing another financial instrument.
b) Selling Hedge (Short Hedge): A strategy designed to safeguard asset value by taking a short position in the futures market.
c) Currency Hedging: A risk management technique aimed at reducing exposure to fluctuations in foreign exchange rates.
d) Commodity Hedging: A strategy used to minimize the risk of price volatility in commodities such as oil, gold, and agricultural products.
e) Stock Hedging: A method employed to protect against adverse movements in individual stock prices.
f) Portfolio Hedging: A comprehensive strategy that seeks to reduce risk across an entire investment portfolio through various hedging instruments.

Commonly used hedging instruments include Futures contracts, Options contracts, and Exchanges.

Two qualitative methods prescribed to assess effectiveness include the Critical Terms Match (CTM) method and the Short-Cut (SC) method. Under the CTM method, the essential terms of the derivative hedging instrument must match exactly with all the crucial terms of the hedged item. The meaning of hedging in finance refers to holding two or more open positions while trading. If there is a loss from your first investment position, you can offset it with the profit from the second position. This helps protect your overall portfolio from the impact of unexpected risks.

Hedging gain or loss is calculated through several steps. First, determine the fair value of both the hedged item and the hedging instrument at the reporting date. Second, recognize any changes in the fair value of the hedging instrument as a gain or loss in the profit or loss statement, which is typically recorded immediately. On the other hand, de-hedging refers to the process of closing an existing hedging position that was initially set up to protect an asset from price fluctuations. This action can be driven by various factors, such as a shift in market outlook, the hedge achieving its intended purpose, the disposal of the primary asset, or efforts to reduce hedging costs.

For instance, an investor who initially hedged against a price decline may decide to remove the hedge if they strongly believe the asset’s value will rise. In the case of gold, an investor who previously sold gold futures contracts to hedge their position might buy them back if they anticipate an increase in gold prices. This allows them to fully benefit from potential price appreciation should their prediction prove accurate. Additionally, de-hedging may take place when the hedge has already served its purpose, such as after a significant drop in asset prices. In such cases, the investor might choose to let the asset recover its value or sell the position entirely.

De-Hedge vs. Hedge

A hedge is an investment strategy designed to minimize the risk of unfavorable price changes in an asset. Typically, this involves taking an opposing position in a related financial instrument, such as a futures contract. However, hedging comes with a tradeoff between risk and reward—while it helps mitigate potential losses, it can also limit possible gains. One common tool for hedging is derivatives, which are financial instruments that derive their value from one or more underlying assets. These can include options, swaps, futures, and forward contracts, with underlying assets ranging from stocks and bonds to commodities, currencies, indices, and interest rates.

Because the correlation between derivatives and their underlying assets is generally well-defined, they can serve as effective hedging instruments. Using derivatives allows for more precise risk management but often requires expertise and substantial capital. However, derivatives are not the only means of hedging. A more straightforward approach involves diversifying a portfolio strategically to offset specific risks, which, although less precise, can still function as a basic form of risk mitigation.

Why Investors Hedge and De-Hedge

Portfolio managers, individual investors, and corporations utilize hedging strategies to minimize their exposure to various financial risks. However, in financial markets, hedging is more complex than simply paying an annual premium to an insurance company. To hedge against investment risk, market participants strategically use financial instruments to counterbalance the potential impact of unfavorable price movements. In essence, they mitigate risk in one investment by taking an opposing position in another.

The primary objective of hedging is not to generate profits but to safeguard against potential losses. However, there is always a cost associated with hedging—whether it comes in the form of option premiums or missed gains from an unfavorable futures position. This expense is an inherent tradeoff for reducing uncertainty and protecting investments.

II. METHODOLOGY

The research method refers to the approach used in conducting a study. This study employs a descriptive qualitative method, which aims to identify elements, characteristics, and attributes of a particular phenomenon. [6], the descriptive method involves data collection, analysis, and interpretation to explain symptoms, events, or occurrences taking place at a given time.

The qualitative approach is often considered a newer research method and is associated with postpositivist philosophy. [6] describes it as an artistic method due to its flexible and creative research process compared to interpretative methods. Unlike experimental research, qualitative studies take place in natural settings, emphasizing in-depth and meaningful insights rather than broad generalizations. In qualitative research, the concept of generalization is referred to as transferability. This study relies on secondary data obtained from event studies, which examine market reactions to information disclosed through announcements. [6] event studies are useful for analyzing market responses. The research was conducted by accessing data from the official of Bank Indonesia.

III. RESULTS AND DISCUSSION

The risk value of an instrument can be limited by the risk of loss through a hedging strategy [1]:

a) Forward contract, is an agreement between two parties to carry out a transaction on the date and price according to the agreement. Forward contracts are usually used by importers or exporters when goods invoiced in foreign currency are purchased from or sold to parties abroad. Guarantees about exchange rate certainty will be clearer, especially when there are transactions with other countries.
b) Futures contracts occur between two parties on a futures exchange in a contract agreement in terms of purchasing assets in an organized exchange. Futures are made with cash payments and not through physical delivery of the underlying assets. There are three important things in this future: 1) if on the agreed date the seller of the contract does not have securities, he can buy securities in the spot market 2) to fulfill the promise that has been agreed with the buyer of the contract, he can still make the same promise with another party, 3) securities to the buyer of the contract must be delivered on the agreed date. Investors get several benefits from futures: 1) get a guarantee of constant results 2) fluctuations in loan interest rates are safe.
c) Money market, where the maximum maturity date is one year, namely with a covered call for equity.

Hedging implementation strategies [7] are (1) Arbitrage, which is the most popular technique used by investors by reselling issuer products elsewhere at a higher price. (2) Diversification, variation in investment instruments (3) Average down, when the stock price rises to the middle of the first and second purchase prices, investors will make a profit and can cover losses in the first purchase. (4) Cash closing, carried out when an uncertain decline is experienced by stock prices. To protect financial conditions and reduce losses, investors will save their money in cash.

Steps in how hedging works: (1) the development of commodity prices in the physical market and futures market is studied and calculated 2) calculation of operating costs including storage costs, insurance costs, and interest expenses, (3) fundamental/technical market analysis to see price movements (4) calculating physical and futures markets (5) studying other sources of information (6) so that the losses incurred are not too large, liquidation is carried out.

De-hedging is the process of closing a position previously created as a hedge in a trade or portfolio. De-hedging could be all at once or in stages. De-hedging can choose if an investor decides that the hedge they created is no longer needed or is too expensive. Here is an explanation of de-hedging: (1) De-hedging could be all at once, namely by removing the full hedge in one trade (2) De-hedging could be in stages, namely by leaving the position partially hedged (3) De-hedging can cause investors to incur losses on the hedges they remove. However, these losses can be offset by profits from investments on the other side of the transaction.

IV. CONCLUSION

To mitigate the risks associated with financial asset movements, such as exchange rate fluctuations, and to minimize potential losses, hedging and de-hedging serve as strategic options for optimizing risk management in the banking sector. These strategies help reduce the impact of foreign exchange volatility and contribute to overall financial stability. Hedging is defined as the structuring of transactions to minimize risks that naturally arise from business activities, both domestically and internationally. The primary objective of hedging is to enhance profitability through various risk management techniques. However, companies engaging in hedging must consider several critical factors, particularly their profitability and liquidity levels, to ensure effective risk mitigation. Likewise, investors should assess both internal and external factors that influence hedging decisions before making investment commitments.

Implementing well-structured hedging strategies enhances financial stability by helping banks and financial institutions mitigate market fluctuations and reduce potential losses. Businesses can improve risk assessment and financial planning by integrating hedging techniques, enabling better decision-making in uncertain conditions. For investors, hedging serves as a crucial tool to protect portfolios from market volatility and optimize long-term returns.

Future research should explore the effectiveness of de-hedging strategies in financial markets and their impact on corporate performance. Investigating the relationship between hedging and business profitability can provide valuable insights for companies aiming to refine their risk management approaches. Additionally, studying technological innovations, such as artificial intelligence and blockchain, can uncover new ways to enhance hedging strategies. Finally, research on hedging in emerging markets could help global investors develop more effective frameworks for managing financial risks in dynamic economic environments.

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