

The Analysis Hedging and Derivative Instrument on Firm Value

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ABSTRACT

This literature review aims to explore and evaluate previous research that focuses on hedging and derivative instruments on firm value. Several frameworks are explored and discussed. In this article, there is some evidence showing that hedging and derivative instruments play a role in firm value, aiming to increase firm value. This article has been reviewed based on research findings, methodology, country studied, and year of publication. The most contributions from these 42 major research articles were from the United States (16,7%) and United Kingdom (11,9%) then the highest publications were conducted by researchers in 2014 and 2017 (28,6%) and 2020 (12%) with empirical study research methods (79%). The results show that companies use hedging to minimize risk because of exchange rate fluctuation. Non-financial companies that carry out hedging activities with derivative instruments to deal with foreign exchange exposure will have a higher firm value. For investors, the results of this study are expected to provide useful information in making investment decisions.

Keywords: *Hedging, Derivative Instruments, Firm Value.*

1. INTRODUCTION

The development of globalization has led to the disappearance of barriers created by barriers between countries, thus supporting the creation of international relations. This allows the company to conduct international trade and develop its business further in a broader scope. The volume of international trade is increasing rapidly, where between 1988 and 2014, exports have increased by 20 times while imports have increased by 24 times. However, companies involved in international trade will face conditions of uncertainty. International trade encourages a variety of currencies used in dealing with buying and selling transactions between various countries.

One hedging that can be used to manage risk is using derivative instrument. Derivative instruments for hedging have grown in the last few decades. The upward trend can be attributed to added volatility in financial markets worldwide.

For companies that have gone public in particular, the company's primary goal is to maximize the wealth or

value of the company. The significance of firm value can be seen from the effect of this increase on the company's ability to obtain various benefits such as access to financial resources from the capital market and high selling prices or values when the company is purchased or involved in a merger. Firm value can be related to the company's market valuation as a whole and represented through stock prices for companies that go public [1]. Firm value can also be expressed in terms of perceptions formed by investors regarding the company's success in managing the company's resources in the current year [2].

Hedging with derivative instruments carried out by companies could reduce exposure and increase company value [3]. Hedging carried out by companies can reduce the possibility of companies experiencing financial difficulties and maintain business continuity from the negative impact of the risk of fluctuations in foreign exchange rates, to lead to higher shareholder value. The relationship between hedging and firm value depends on the presence of market imperfections [4]. Hedging activities with derivative instruments can affect firm value by reducing financial distress costs, taxes,

underinvestment problems, agency costs, and information asymmetry.

This study aims to determine the hedging activity with derivative instruments on firm value. Theoretically, this research is expected to provide a further understanding of how the effect of hedging activities with derivative instruments on the firm value that can support shareholder value maximization theory. Practically, this research is expected to provide an overview to non-financial companies regarding the impact of the policies and information issued on the perceptions of investors and potential investors.

2. METHODS

This article aims to compile research in the financial sector on hedging, derivative instruments, and firm value. Therefore, this discussion includes academic articles in the period 2010 to 2021. This discussion covers the following primary research databases: Emerald, IEEE, Sage, Scimedirect, and Springer. Database searches yielded hundreds of articles. Each article is checked to ensure that its content is relevant from the point of view of the research objectives. The examination and selection of articles are based on the criteria that only articles whose main contribution revolves around the linkage of finance, hedging, derivative instruments, and firm value. This process resulted in 42 articles that were finally selected for in-depth evaluation. The description is classified by year, country, and methodology for analysis. The result is structured to provide qualitative descriptive analysis to overview research analysis of hedging and derivative instruments on firm value.

3. RESULTS AND DISCUSSION

3.1. Descriptive Analysis Results

The most important articles in this study related to hedging instruments and derivatives on firm value were identified from the International Review of Financial Analysis, Journal of Corporate Finance, Journal of Accounting Auditing and Finance, and Journal of Multinational Financial Management (28.8%), then Managerial Finance, J-Econ Finan and Finance Research Letters (14.1%). Countries that contributed to this article were the United States (16.7%), UK (11.9%), Malaysia, Germany, and India (9.5%), Turkey, Taiwan and China (7.2%) and followed by Australia, Korea, Norway (4.7%), then Italy, Spain, and Brazil (2.4%).

Research on hedging instruments and derivatives on firm value has been the object of researchers' attention until 2021. The number of articles published from 2010 to 2021 has decreased and increased. The most research in 2014 and 2017, the distribution of articles by year of publication was 2010 (7.2%), 2011-2012 (4.7%), 2013 (9.5%), 2014 (14.3%), 2015 (7.2%), 2016 (9.5%), 2017

(14.3%), 2018 (7.2%), 2019 (4.7%), 2020 (12%) and 2021 (4.7%).

Based on the research methodology of 42 articles, the most important sources of empirical evidence in the sample are qualitative approaches: empirical studies (78.6%), case studies (16.8%), surveys (2.3%), and literature review respectively (2.3%). Figure 1-3 shows the results of the descriptive analysis.

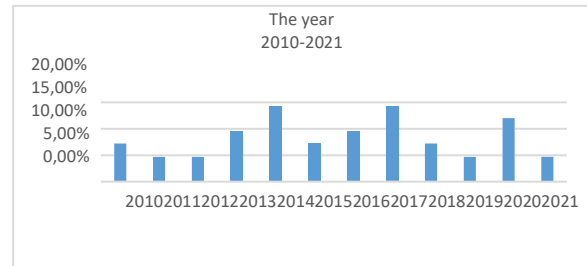


Figure 1. Year of publication article

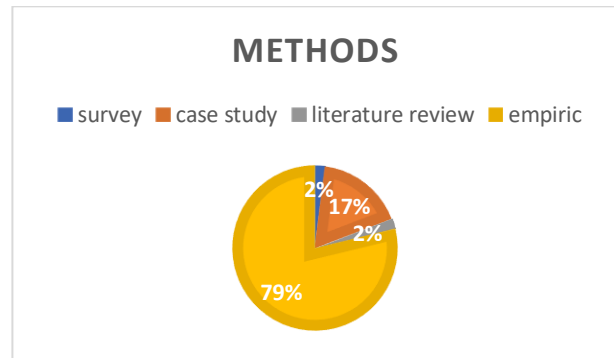


Figure 2. Literature review method

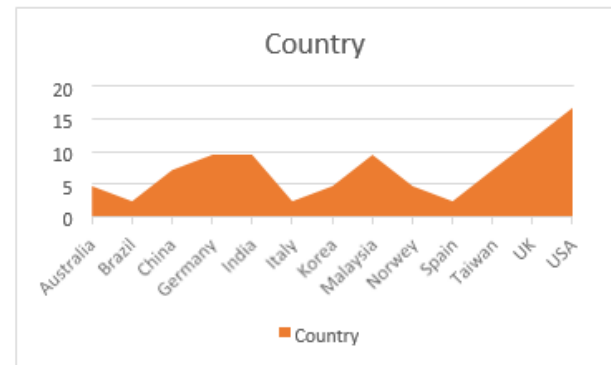


Figure 3. Country of publication

3.2. Thematic Analysis Results

Based on data articles, in general, it can be said that companies that carry out international transactions will benefit from hedging with foreign currency derivative instruments, including reducing the possibility of bankruptcy, making it easier to apply for credit to creditors, and also allowing companies to get loans with lower interest rates [5].

Foreign currency derivatives exert a more prominent impact on firm value when the exchange rate depreciates

and when the economy is booming [6]. This is in line with research conducted by [5], [7] that say The use of foreign currency derivatives exerts a more prominent impact on firm value when the exchange rate depreciates and when the economy is booming. Firms with lower operating income margins tend to use derivatives to protect this already thin margin from the potential financial risks.

The several firm characteristics are able to explain the use of derivatives and hedging by firms, but market timing in the derivative markets is explained solely by the firm's foreign exposure, corporate governance, and the macroeconomic environment [8].

There is a hypothesis to explain the improved business value associated with hedging activities: shareholder value maximization. This idea outlines how a company's performance is assessed by its ability to increase shareholder wealth. Hedging should be implemented in a corporation to help management increase shareholder wealth by minimizing cash flow volatility. Firms with consistent cash flow might avoid situations that reduce shareholder wealth, such as the rise of financial distress costs, the cost of asset replacement, and underinvestment issues [9].

Financial anguish caused when a business has challenges, such as legal bills and bankruptcy expenditures. Stable earnings and cash flow may avert insolvency, resulting in improved firm value [7]. Asset substitution illustrates the cost of various incentives between owners and lenders. Shareholders are usually supportive when firms invest at risk since it might result in significant earnings.

One of the instruments that can be used for hedging is a derivative designated for hedging purposes. Something Derivative instruments are variable dependent because their value changes, does not or require a small initial net investment, and is settled on a specified date in the future. There are several types of derivative instruments, namely forward, futures, option, and swap contracts. According to the research results [1] the functions of derivatives hedging are better than the non- derivatives hedging methods.

The use of foreign currency derivatives, alone or along with other types of derivatives, drives firm value positively, and hedging presents an economic advantage for all firms, especially those from common law and developed countries [10]. Meanwhile, according to [11] Derivative instruments are introduced on the general expectation of controlling risk, hence the volatility in the underlying spot market, which happened in the cases of equity derivatives. The same occurred in the case of interest rate derivatives because this instrument is expected to stabilize interest rates, hence stock prices.

Underinvestment is an issue that occurs when the high cost of external funding prohibits companies from making investments in accordance with shareholder

expectations, resulting in unhappiness and, eventually, a reduction in corporate value. Hedging allows the firm to have more consistent cash flow and meet its investment needs without relying too much on external finance [9]. Hedging protects the corporation against external risks such as currency, interest rate, and commodity price variations, providing for predictable cash flow and corporate profit. This circumstance must be represented in increasing business value [7]. However, [7] reveals that utilizing derivative instruments as a speculative strategy affects earnings volatility, resulting in a loss in business value. As a result, the real impact of using derivative instruments is determined by the benefits delivered to the firm [9].

Hedging with derivative instruments may surely lower a firm's risks and deliver benefits, such as a more steady profit rate [12]. Several prior research on hedging theories reveal that enterprises that employ derivative instruments have an improvement in profitability, which has proven effective in dealing with frictions in basic financial markets. As a result, a company's use of derivative instruments for hedging will result in a positive signal of more steady earnings. Investors will recognize the favorable signal, which will be reflected in the stock price [7]. A corporation that uses derivative instruments for hedging has a greater corporate value.

4. CONCLUSIONS

Based on the results of descriptive analysis and qualitative thematic analysis regarding hedging, a derivative instrument on firm value. Exchange rate fluctuation risk is one of the risks in international trade. Companies use hedging to minimize risk because of exchange rate fluctuation. Non-financial companies that carry out hedging activities with derivative instruments to deal with foreign exchange exposure will have a higher firm value. For investors, the results of this study are expected to provide useful information in making investment decisions.

REFERENCES

- [1] Y. Chen and Q. Q. Shao, "Firm value effects of derivatives hedging for risk exposure: An empirical research on Chinese listed enterprises," *2010 Int. Conf. Manag. Sci. Eng. ICMSE 2010*, pp. 1352–1358, 2010, doi: 10.1109/ICMSE.2010.5719968.
- [2] B. Frensidy and T. I. Mardhaniaty, "The Effect of Hedging with Financial Derivatives on Firm Value at Indonesia Stock Exchange," *Econ. Financ. Indones.*, vol. 65, no. 1, pp. 20–32, Aug. 2019, doi: 10.47291/EFI.V65I1.614.
- [3] N. Beneda, "The impact of hedging with derivative instruments on reported earnings volatility," <http://dx.doi.org/10.1080/09603107.2012.70959>

- 9, vol. 23, no. 2, pp. 165–179, Jan. 2012, doi: 10.1080/09603107.2012.709599.
- [4] C. K. Lau, “How corporate derivatives use impact firm performance?,” *Pacific-Basin Financ. J.*, vol. 40, pp. 102–114, Dec. 2016, doi: 10.1016/J.PACFIN.2016.10.001.
- [5] L. M. Dunham, “Managerial hedging ability and firm risk,” *J. Econ. Financ.*, vol. 36, no. 4, pp. 882–899, Oct. 2012, doi: 10.1007/S12197-010-9160-9/TABLES/6.
- [6] H. (Robin) Luo and R. Wang, “Foreign currency risk hedging and firm value in China,” *J. Multinat. Financ. Manag.*, vol. 47–48, pp. 129–143, Dec. 2018, doi: 10.1016/J.MULFIN.2018.11.002.
- [7] P. Huang, M. H. Kabir, and Y. Zhang, “Does Corporate Derivative Use Reduce Stock Price Exposure? Evidence From UK Firms,” *Q. Rev. Econ. Financ.*, vol. 65, pp. 128–136, Aug. 2017, doi: 10.1016/J.QREF.2017.02.004.
- [8] J. Luiz Rossi, “Hedging, selective hedging, or speculation? Evidence of the use of derivatives by Brazilian firms during the financial crisis,” *J. Multinat. Financ. Manag.*, vol. 23, no. 5, pp. 415–433, Dec. 2013, doi: 10.1016/J.MULFIN.2013.08.004.
- [9] H. T. Kim, M. Papanastassiou, and Q. Nguyen, “Multinationals and the impact of corruption on financial derivatives use and firm value: Evidence from East Asia,” *J. Multinat. Financ. Manag.*, vol. 39, pp. 39–59, Mar. 2017, doi: 10.1016/J.MULFIN.2017.02.001.
- [10] P. Bachiller, S. Boubaker, and S. Mefteh-Wali, “Financial derivatives and firm value: What have we learned?,” *Financ. Res. Lett.*, vol. 39, p. 101573, Mar. 2021, doi: 10.1016/J.FRL.2020.101573.
- [11] S. N. (Pal) and A. K. Chattopadhyay, “Impact of Introducing Different Financial Derivative Instruments in India on Its Stock Market Volatility:,” <http://dx.doi.org/10.1177/0971890714558704>, vol. 18, no. 2, pp. 135–153, Mar. 2015, doi: 10.1177/0971890714558704.
- [12] G. Allayannis, U. Lel, and D. P. Miller, “The use of foreign currency derivatives, corporate governance, and firm value around the world,” *J. Int. Econ.*, vol. 87, no. 1, pp. 65–79, May 2012, doi: 10.1016/J.JINTECO.2011.12.003.