CHAPTER V

CONCLUSION

5.1. Conclusion

This study found that macroeconomic variables have varied impacts on cryptocurrency volatility in the case of Bitcoin and Ethereum. For Bitcoin, the S&P 500 Index shows a positive and significant effect on volatility, while gold prices also have a positive and significant effect. These findings suggest that Bitcoin volatility tends to increase alongside positive movements in the equity market and during fluctuations in the safe-haven gold market. The result is in line with previous studies that identify Bitcoin as being sensitive to both stock market sentiment and commodity price changes, reflecting its dual role as a speculative asset and a risk-hedge instrument. In contrast, crude oil prices have a negative but statistically insignificant effect on Bitcoin volatility, indicating that energy market changes play a limited role in influencing Bitcoin price fluctuations during the observed period.

For Ethereum, the influence of all three macroeconomic variables, which is S&P 500 Index, Crude Oil, and Gold, is statistically insignificant. This suggests that Ethereum's volatility is more likely driven by internal market dynamics or cryptocurrency-specific events rather than by broader macroeconomic indicators. The difference between Bitcoin and Ethereum's results may be due to differences in market capitalization, liquidity, investor base, and institutional adoption, which shape how each cryptocurrency responds to external shocks.

In conclusion, the results indicate that while Bitcoin volatility is influenced by certain macroeconomic factors, Ethereum's volatility is less affected by such

variables in the observed period. The persistent high correlation between Bitcoin and Ethereum suggests that they often move together, which has implications for diversification strategies within the cryptocurrency market. These findings also highlight that the nature of volatility spillovers and macroeconomic linkages can differ significantly between cryptocurrencies, meaning that investor strategies should account for the distinct risk-return characteristics of each asset. Although this study is limited to a five-year period, it captures recent market dynamics and offers a basis for comparison with previous research on financial market linkages and cryptocurrency volatility behavior. Future research is needed to examine whether these relationships hold in different market regimes or during periods of extreme volatility.

5.2. Research Implications

1. Theoretical Implications

This research adds to theoretical knowledge by improving the understanding of how volatility and correlation move between cryptocurrencies and traditional assets. By studying the link between Bitcoin, Ethereum, the S&P 500, crude oil, and gold using the M-GARCH models. This study supports and extends theories about market integration, asset price behavior, and portfolio diversification. The findings show that Bitcoin's volatility reacts more to macroeconomic factors than Ethereum's, highlighting differences in how cryptocurrencies respond to market changes. The strong and lasting correlation between Bitcoin and Ethereum also adds to portfolio management theory by showing that these assets often move together, even in changing market conditions.

2. Practical Implications

This research provides valuable practical insights for investors in the cryptocurrency and traditional asset markets. The findings show that Bitcoin's volatility is significantly linked to the S&P 500 and gold, suggesting that these traditional indicators can serve as reliable benchmarks for forecasting Bitcoin's price movements. Ethereum, in contrast, displays weaker connections with traditional assets, indicating that its volatility is shaped more by internal crypto market dynamics such as blockchain adoption, decentralized finance activity, and investor sentiment. For investors, this means Bitcoin behaves more like a "risk-on" asset that responds to global market shifts, while Ethereum's risks and returns are driven by factors unique to the digital asset ecosystem. Understanding these differences helps investors adjust their strategies when allocating funds across cryptocurrencies and traditional assets.

For portfolio managers, this study highlights the importance of managing risk through careful diversification strategies. The results show that Bitcoin and Ethereum are strongly correlated with each other, meaning that holding both assets provides limited diversification benefits. Therefore, portfolio managers should not rely on combining these two alone but should instead incorporate less-related assets, whether within the crypto space or from traditional markets, to achieve balanced portfolios. By accounting for volatility clustering and spillover effects, portfolio managers can develop more resilient strategies that protect against extreme market fluctuations.

For policymakers, the findings underline the growing integration between cryptocurrency markets and traditional financial systems. Bitcoin's volatility linkages with global assets such as the S&P 500 and gold show that shocks in the crypto market can spill over into the broader economy, especially during times of financial stress. Policymakers can use these insights to strengthen risk monitoring frameworks, assess systemic vulnerabilities, and design measures that reduce contagion across asset classes. Regulations informed by these findings will help promote market stability while addressing the risks that cryptocurrencies pose to the financial system.

For the Indonesian government, particularly the OJK, which now oversees cryptocurrency regulation, this study carries important regulatory implications. The evidence of volatility clustering and cross-market connections supports the need for a comprehensive regulatory approach that balances innovation and investor protection. On one hand, OJK must establish safeguards to protect retail investors from the extreme risks associated with cryptocurrency volatility. On the other hand, clear and supportive regulations are also needed to encourage the responsible growth of the digital asset sector. By integrating crypto oversight with traditional financial market supervision, OJK can ensure that Indonesia's financial system remains stable, competitive, and resilient in the face of global digital asset trends.

5.3. Research Limitations

The research limitations of this study are as follows:

1. This study only examines the volatility and correlation of Bitcoin and Ethereum with the S&P 500 Index, crude oil prices, and gold prices as the research variables.
2. The analysis focuses on the M-GARCH models without considering other volatility or correlation models that might provide different results.
3. The study uses weekly data from 2020 to 2024, which may limit the generalization of findings to other time periods or data frequencies.

5.4. Future Research

From the results and conclusions of this study, future research is suggested to include a wider range of variables, such as additional traditional assets or alternative cryptocurrencies, to capture broader market interactions. Expanding the time series data or using higher-frequency data like daily or intraday could provide deeper insights into short-time volatility and correlations patterns. Future studies may also consider applying alternative econometrics models beyond M-GARCH to compare results and enhance the robustness of findings.