

RISK IDENTIFICATION AND PROFIT OPTIMIZATION FOR STAKEHOLDERS IN COMMODITY TRADING MARKETS: EVIDENCE FROM VIETNAM

Nguyen Duc Thanh, Nguyen Quoc Dinh, Le Xuan Ba, Tran Cong Nghiep, Phan Khanh Duy*
Binh Duong University, *Email: pkduy@bdu.edu.vn

Abstract:

This study investigates how key market risk factors affect profitability in Vietnam's commodity trading markets during the 2013–2023 period. The analysis focuses on five modelled determinants of profitability, namely price volatility, exchange rate fluctuations, policy risk, market liquidity, and GDP growth. A two-step System Generalized Method of Moments estimator is employed to examine the dynamic relationship between these factors and profitability while addressing endogeneity and persistence in panel data. To complement the regression analysis, Value-at-Risk is used to quantify the downside exposure of major traded commodities under different confidence levels. The findings indicate that price volatility, currency fluctuations, and policy risk exert significant negative effects on profitability, whereas market liquidity and GDP growth have significant positive effects. The results also show that crude oil exhibits the highest downside risk, followed by aluminum and rice. The study contributes empirical evidence from an emerging market context by linking dynamic profitability estimation with commodity-specific risk quantification. The findings imply that market participants should strengthen exchange rate and price-risk management, while policymakers should improve regulatory stability and market liquidity to support more sustainable trading performance

Keywords: Commodity markets; Profitability; Risk management; Volatility.

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Nhận diện rủi ro và tối ưu hóa lợi nhuận cho các bên liên quan trong thị trường giao dịch hàng hóa: Bằng chứng từ Việt Nam

Tóm tắt:

Nghiên cứu này xem xét mối quan hệ giữa các yếu tố rủi ro và lợi nhuận trong thị trường giao dịch hàng hóa của Việt Nam, đồng thời giải quyết các khoảng trống quan trọng trong tài liệu về quản lý rủi ro và tối ưu hóa lợi nhuận tại các nền kinh tế đang phát triển. Nghiên cứu kết hợp phương pháp ước lượng tổng quát hệ thống moment để phân tích động và giá trị rủi ro nhằm định lượng các rủi ro tài chính. Nghiên cứu đóng góp vào các khung lý thuyết bằng cách tích hợp rủi ro và lợi nhuận trong bối cảnh các hạn chế thể chế và thị trường phổ biến ở các nền kinh tế đang phát triển. Về thực tiễn, cung cấp các hiểu biết hữu ích cho các bên liên quan, khuyến nghị áp dụng các chiến lược phòng ngừa rủi ro, đa dạng hóa và công nghệ để giảm thiểu rủi ro và nâng cao lợi nhuận. Các khuyến nghị chính sách nhấn mạnh tính nhất quán trong quy định và phát triển thị trường để tạo điều kiện thuận lợi cho tăng trưởng bền vững. Các nghiên cứu trong tương lai nên mở rộng so sánh giữa các nền kinh tế mới nổi và sử dụng học máy để cung cấp các hiểu biết chi tiết hơn.

Từ khóa: Thị trường hàng hóa; Lợi nhuận; Quản lý rủi ro; Biến động.

1. Introduction

Commodity trading markets are integral to the economic frameworks of emerging economies, providing a foundation for resource allocation, international trade, and economic development (Tang, Ke, & Xiong, Wei, 2012). In Vietnam, commodities such as agricultural products, energy, and metals contribute significantly to GDP and export revenues, highlighting their economic importance (World Bank, 2020). However, the volatility inherent in commodity markets, driven by factors such as supply-demand fluctuations, geopolitical uncertainties, and macroeconomic shocks, creates substantial risks for stakeholders,

ranging from producers to policymakers (Geman, Hélyette, 2005).

Stakeholders in Vietnam face specific challenges in managing these risks. Price volatility, for example, impacts cash flows and profit margins, while regulatory uncertainties increase operational complexity (Nguyen Van Hieu et. al, 2019). Additionally, the limited adoption of advanced risk management tools further constrains the ability of market participants to optimize profitability (Kongcharoen et. al, 2021). These challenges have led to increased interest in developing risk management strategies tailored to the context of emerging economies.

Global trends in commodity trading, including the adoption of algorithmic trading, digital platforms, and the integration of environmental, social, and governance (ESG) considerations, are transforming market dynamics (Bessembinder et. al, 2021). For Vietnam, these trends present opportunities for efficiency gains but also pose challenges related to technological readiness and institutional capacity. Adapting to these trends while addressing unique local challenges is crucial for sustaining the growth and competitiveness of Vietnam's commodity markets (United Nations Conference on Trade and Development, 2021).

1.2. Research Problem and Gap

Despite the economic significance of commodity trading markets in Vietnam,

research on integrated risk management and profit optimization remains sparse. Existing studies often adopt a siloed approach, focusing either on descriptive market analyses or specific risks without exploring their combined impact on profitability (Pham, Quoc Trung, & Nguyen, Duc Minh, 2018). This gap is particularly evident in the lack of empirical studies that employ advanced quantitative tools such as System Generalized Method of Moments (SGMM) and Value-at-Risk (VaR). These methodologies, widely used in developed markets, have the potential to provide data-driven insights into dynamic risk-profit relationships (Arellano, Manuel, & Bover, Olympia, 1995), (Jorion, Philippe, 2007).

Emerging markets like Vietnam also face unique challenges, such as institutional weaknesses, limited access to market data, and regulatory inconsistencies, which further complicate risk management efforts (Nguyen, Thanh Dat, & Tran, Quang Trung 2020). Addressing these challenges requires a comprehensive understanding of the risks and their impact on profitability, underscoring the need for research that integrates these dimensions.

1.3. Research Objectives and Questions

This study aims to examine how major market-related risk factors and market conditions shape profitability in Vietnam's commodity trading markets.

Specifically, the study pursues three objectives. First, it identifies the principal factors associated with profitability, including price volatility, exchange rate fluctuations, policy risk, market liquidity, and GDP growth. Second, it estimates the direction and significance of the effects of these factors on profitability within a dynamic panel framework. Third, it quantifies the downside risk of selected commodities through Value-at-Risk in order to complement the profitability analysis with commodity-level loss exposure.

In line with these objectives, the study addresses the following research questions. First, how do price volatility, exchange rate fluctuations, and policy risk affect profitability in Vietnam's commodity trading markets? Second, to what extent do market liquidity and GDP growth support profitability in these markets? Third, what level of downside risk is reflected in the Value-at-Risk estimates for major traded commodities in Vietnam?

1.4. Contribution to Literature

This study contributes to the literature in two ways. First, it provides evidence on the determinants of profitability in Vietnam's commodity trading markets by jointly examining market risk factors and market-supporting conditions within a dynamic empirical framework. In doing so, it extends discussion of commodity-market performance to an emerging economy context characterized by

higher volatility, regulatory uncertainty, and evolving market institutions. Second, the study combines System Generalized Method of Moments and Value-at-Risk for complementary purposes. System GMM is used to estimate how risk factors and market conditions influence profitability over time, whereas Value-at-Risk is used to assess the downside exposure of selected commodities. This dual approach strengthens the empirical analysis by linking firm- or stakeholder-level profitability determinants with commodity-level risk measurement.

2. Literature Review

2.1. Overview of Commodity Trading Markets

Commodity trading markets serve as critical mechanisms for resource allocation, risk management, and price discovery. Globally, these markets are driven by macroeconomic fundamentals, geopolitical influences, and technological advancements (Tang, Ke, & Xiong, Wei, 2012). In developed economies, commodity trading benefits from robust institutional frameworks, sophisticated financial instruments, and advanced technologies, enabling stakeholders to effectively manage risks and optimize profits (Gorton, Gary, & Rouwenhorst, K. Geert 2006). These markets exhibit higher liquidity, transparency, and regulatory oversight, facilitating efficient operations and attracting substantial investor participation.

Conversely, emerging markets like Vietnam face unique challenges. Despite their economic potential, commodity markets in these regions are often constrained by weak institutional frameworks, inadequate infrastructure, and limited access to financial instruments. These factors exacerbate market inefficiencies and hinder stakeholders' ability to respond to volatility (Nguyen Van Hieu et. al, 2019). Vietnam's commodity markets, dominated by agricultural products and raw materials, are particularly vulnerable to price fluctuations, currency instability, and regulatory uncertainties. While global trends such as algorithmic trading and digital platforms have begun to penetrate these markets, their adoption remains limited due to technical and financial barriers (United Nations Conference on Trade and Development, 2021).

2.2. Risk Identification in Commodity Markets

Commodity trading markets are inherently risky, with stakeholders exposed to various types of risks:

Market Risk: Price volatility driven by supply-demand imbalances, geopolitical tensions, and macroeconomic shocks (Jorion, Philippe, 2007).

Credit Risk: Counterparty default risks, particularly prevalent in markets with weak regulatory frameworks (Kongcharoen et. al, 2021).

Operational Risk: Risks arising from inadequate systems, processes, or human errors, which can disrupt trading operations (Geman, Hélyette, 2005).

Regulatory Risk: Changes in policies, tariffs, and trade regulations that impact market stability and profitability (Nguyen, Thanh Dat, & Tran, Quang Trung 2020).

Theoretical frameworks such as Modern Portfolio Theory (MPT) and Value-at-Risk (VaR) provide structured approaches to identifying and managing these risks. MPT emphasizes diversification to minimize risk while maintaining returns, making it a cornerstone of portfolio management (Markowitz, Harry 1952). VaR, on the other hand, quantifies potential losses within a specified confidence interval, offering a robust tool for risk assessment (Jorion, Philippe, 2007). However, the applicability of these frameworks in emerging markets like Vietnam is often limited by data availability, market inefficiencies, and institutional constraints (Tang, Ke, & Xiong, Wei, 2012).

2.3. Profit Optimization in Commodity Markets

Profit optimization in commodity markets involves strategies aimed at balancing risk and return. Three key strategies dominate the literature:

Hedging: The use of derivatives such as futures, options, and swaps to mitigate price risks. Studies have shown

that effective hedging strategies can significantly reduce volatility and enhance profitability, especially in emerging markets (Nguyen Van Hieu et. al, 2019).

Diversification: Reducing risk exposure by investing in a mix of commodities, regions, or asset classes. This approach is particularly relevant in volatile markets, where price movements are often unpredictable (Gorton, Gary, & Rouwenhorst, K. Geert 2006).

Technological Adoption: Leveraging technologies such as algorithmic trading, big data analytics, and blockchain to improve efficiency and decision-making. While these technologies are widely adopted in developed markets, their penetration in emerging markets remains limited due to cost and expertise barriers (United Nations Conference on Trade and Development, 2021).

2.4. Methodological Gaps in Existing Research

While existing studies provide valuable insights into risk and profitability in commodity markets, they exhibit several methodological limitations. First, many studies adopt static models that fail to capture the dynamic nature of risk-profit relationships. Traditional regression analyses, for example, assume fixed coefficients and ignore time-varying effects, limiting their applicability in volatile markets (Arellano, Manuel, &

Bover, Olympia, 1995). Second, the reliance on descriptive analyses and qualitative approaches often lacks the rigor needed to provide actionable insights (Nguyen, Thanh Dat, & Tran, Quang Trung 2020).

Dynamic models like System Generalized Method of Moments (SGMM) offer a promising alternative by addressing endogeneity and capturing the temporal dynamics of risk and profitability (Blundell, Richard, & Bond, Stephen 1998). Similarly, Value-at-Risk (VaR) provides a practical metric for quantifying potential losses, enabling stakeholders to make informed decisions (Jorion, Philippe, 2007). Despite their advantages, these methodologies remain underutilized in emerging markets, where data limitations and technical challenges persist.

2.5. Research Model Specification and Hypotheses Proposed

To examine the determinants of profitability in Vietnam's commodity trading markets, this study develops a dynamic panel model in which profitability is specified as the dependent variable and is explained by lagged profitability, price volatility, exchange rate fluctuations, policy risk, market liquidity, and GDP growth. The model is designed to capture both the persistence of profitability over time and the contemporaneous effects of major market risks and market-supporting conditions. The analytical

focus is intentionally restricted to variables that are explicitly included in the empirical model and subsequently evaluated in the results section. In this way, the research framework maintains consistency between the study objectives, empirical specification, hypothesis development, and reported findings.

Price volatility is a defining characteristic of commodity markets and a major source of uncertainty for market participants. In Vietnam's commodity trading markets, fluctuations in commodity prices can reduce profitability by making revenues less predictable, weakening planning accuracy, and compressing trading margins. This effect is particularly important in emerging markets, where institutional and financial buffers may be less developed and where stakeholders are more exposed to abrupt shifts in supply, demand, and external shocks. Greater price instability therefore tends to intensify market risk and undermine financial performance.

H1: Price volatility negatively affects profitability in Vietnam's commodity trading markets. (Tang, Ke, & Xiong, Wei, 2012), (Nguyen Van Hieu et. al, 2019)

Exchange rate fluctuations also represent an important source of financial risk because Vietnam's commodity trading activities are closely linked to international trade and export-oriented transactions. When exchange

rates become unstable, traders and producers face uncertainty in pricing, settlement values, input costs, and international competitiveness. Currency instability can therefore distort expected returns and create additional financial pressure, especially for stakeholders with substantial exposure to foreign markets. As a result, exchange rate fluctuations are expected to reduce profitability.

H2: Exchange rate fluctuations negatively affect profitability in Vietnam's commodity trading markets. (Nguyen Van Hieu et. al, 2019), (Nguyen, Thanh Dat, & Tran, Quang Trung 2020)

Policy risk is another critical factor shaping performance in commodity markets. In emerging economies such as Vietnam, changes in regulations, tariffs, trade controls, and administrative procedures can increase compliance costs, disrupt market expectations, and complicate strategic decision-making. Uncertainty in the policy environment may also discourage investment and reduce operational efficiency by making market conditions less predictable. For this reason, higher policy risk is expected to weaken profitability in Vietnam's commodity trading markets.

H3: Policy risk negatively affects profitability in Vietnam's commodity trading markets. (Nguyen, Thanh Dat, & Tran, Quang Trung 2020)

By contrast, market liquidity is expected to support profitability. A

more liquid market enables smoother transactions, reduces trading frictions, improves price discovery, and allows stakeholders to respond more efficiently to changing market conditions. Liquidity also facilitates entry and exit, lowers adjustment costs, and strengthens the overall functioning of the market. In this respect, higher market liquidity should create a more favorable environment for trading performance and profitability.

H4: Market liquidity positively affects profitability in Vietnam's commodity trading markets. (Gorton, Gary, & Rouwenhorst, K. Geert 2006)

GDP growth is included as a macroeconomic condition reflecting the broader economic environment in which commodity trading takes place. Stronger economic growth is generally associated with higher demand, improved business confidence, and more active commercial exchange, all of which can contribute positively to trading outcomes. In the context of Vietnam, sustained GDP growth may strengthen commodity-market performance by supporting domestic consumption, investment, and market expansion. Accordingly, GDP growth is expected to enhance profitability.

H5: GDP growth positively affects profitability in Vietnam's commodity trading markets. (Tang, Ke, & Xiong, Wei, 2012), (World Bank, 2020)

3. Methodology

3.1. Research Design

This study adopts a quantitative research design that combines two complementary analytical approaches. First, a dynamic panel regression based on the two-step System Generalized Method of Moments is used to estimate the effects of price volatility, exchange rate fluctuations, policy risk, market liquidity, and GDP growth on profitability over time. This estimator is appropriate because profitability is likely to be persistent, some explanatory variables may be endogenous, and the panel structure contains both temporal dynamics and unobserved heterogeneity. Second, Value-at-Risk is employed to quantify the downside risk of selected commodities under different confidence levels.

The two methods serve different but related purposes. System GMM addresses the main explanatory question of which factors significantly affect profitability. Value-at-Risk addresses a complementary risk-measurement question by estimating the magnitude of potential losses for individual commodities. Accordingly, Value-at-Risk does not enter the regression equation as an explanatory variable; rather, it supplements the analysis by providing commodity-level evidence on loss exposure within the same market context.

3.2. Data Description

This study employs an integrated quantitative–qualitative dataset to

examine risk–profitability dynamics in Vietnam’s commodity trading from 2013–2023, covering global shocks (COVID-19, 2020–2022), trade liberalisation (CPTPP, EVFTA), and digital adoption. Market data are drawn from the Mercantile Exchange of Vietnam (MXV), including historical price indices, volumes, and volatility series for agricultural (rice, coffee), energy (crude oil, natural gas), and metals (aluminium, copper). Qualitative evidence comes from stakeholder surveys of producers, traders, and policymakers, capturing risk perceptions, hedging and diversification constraints, and profitability optimisation challenges. Macroeconomic controls (GSO and

World Bank) provide GDP growth, inflation, and currency-fluctuation series critical to export-linked revenue instability.

The dependent variable is profitability, operationalised as ROI and profit margins: $ROI = \text{Profit} / \text{Investment} \times 100$, capturing stakeholder-level return efficiency. Independent variables include Price Volatility = $\sigma(\text{Prices}_t)$, Currency Fluctuations = $\sigma(\text{FX}_t)$, and Policy Risks = Regulatory Change Frequency, introducing compliance frictions. Liquidity effects are controlled via market-liquidity functions, while commodity traits (seasonality, demand, output) enter the model as sector-specific modifiers.

Table 1. Variable measurement and expected relationships

Variable	Symbol	Type	Operational definition	Calculation / proxy	Expected sign
Profitability	PROF	Dependent	Stakeholder profitability in commodity trading activities	Return on investment or profit margin, measured as Profit / Investment × 100	N/A
Lagged profitability	L.PROF	Dynamic term	Previous-period profitability capturing persistence	One-period lag of profitability	Positive
Price volatility	PVOL	Independent	Instability in commodity prices over time	Standard deviation of commodity prices over the relevant period	Negative
Exchange rate fluctuations	EXCH	Independent	Instability in exchange rates affecting trade values and costs	Standard deviation or percentage change in the	Negative

Variable	Symbol	Type	Operational definition	Calculation / proxy	Expected sign
				relevant exchange-rate series	
Policy risk	PRISK	Independent	Uncertainty arising from regulatory and policy changes	Frequency or intensity index of regulatory or policy changes affecting commodity trade	Negative
Market liquidity	LIQ	Control / explanatory	Ease of trading in the market without substantial price distortion	Trading volume, turnover ratio, or liquidity index from market data	Positive
GDP growth	GDPG	Control / explanatory	Macroeconomic expansion supporting trading activity	Annual GDP growth rate	Positive

3.3 Empirical Strategy

The empirical strategy consists of two linked stages. In the first stage, the study estimates a dynamic profitability model using the two-step System GMM estimator. The baseline specification can be expressed as follows:

$$\begin{aligned}
 PROF_{it} = & \alpha PROF_{it-1} + \beta_1 PVOL_{it} \\
 & + \beta_2 EXCH_{it} \\
 & + \beta_3 PRISK_{it} + \beta_4 LIQ_{it} \\
 & + \beta_5 GDPG_{it} + \mu_i + \varepsilon_{it}
 \end{aligned}$$

where $PROF_{it}$ denotes profitability, $PROF_{it-1}$ is lagged profitability, $PVOL_{it}$ is price volatility, $EXCH_{it}$ is exchange rate fluctuation, $PRISK_{it}$ is policy risk, LIQ_{it} is market liquidity, and $GDPG_{it}$ is GDP growth. The estimator is selected because it is suitable for dynamic panel settings with possible endogeneity, unobserved individual effects, and autocorrelation. Model validity is assessed through the Hansen test of overidentifying restrictions and

the Arellano-Bond test for second-order serial correlation.

In the second stage, the study applies Value-at-Risk to selected commodities in order to estimate potential losses at the 95% and 99% confidence levels. The purpose of this stage is descriptive and risk-quantifying rather than causal. Whereas System GMM explains profitability at the model level, Value-at-Risk identifies the extent of downside exposure at the commodity level. The VaR estimates therefore complement, rather than duplicate, the regression analysis.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The descriptive statistics of the variables utilized in this study provide key insights into the trends, variability, and characteristics of Vietnam's

commodity trading markets over the 2013–2023 period. Table 2 summarizes the statistical properties of the key variables, serving as the foundation for understanding the dynamics of risk and profitability within the dataset.

Stakeholder profitability (ROI) shows mean = 0.145, σ = 0.087, min = -0.021, max = 0.365. Price volatility carries

mean= 0.126, σ = 0.054, min = 0.045, max = 0.312. Currency fluctuations record mean = 0.072, σ = 0.028, min = 0.032, max = 0.138. Policy risk (1–5 scale) yields mean = 2.67, σ = 1.21, min = 1.00, max = 5.00. Market liquidity has mean = 1.25, σ = 0.45, min = 0.56, max = 2.67. GDP growth reports mean = 6.32%, σ = 1.20%, min = 2.91%, max = 7.89%

Table 2: Summary Statistics of Variables

Variable	Mean	Std. Dev.	Min	Max
Profitability (ROI)	0.145	0.087	-0.021	0.365
Price Volatility	0.126	0.054	0.045	0.312
Currency Fluctuations	0.072	0.028	0.032	0.138
Policy Risks	2.67	1.21	1	5
Market Liquidity	1.25	0.45	0.56	2.67
GDP Growth	6.32	1.2	2.91	7.89

4.2 Empirical Results (SGMM)

Table 3: SGMM Results

Variable	Coefficient	Std. Error	z-Statistic	p-Value
Lagged Profitability	0.512	0.042	12.19	0.000***
Price Volatility	-0.223	0.078	-2.86	0.004**
Currency Fluctuations	-0.138	0.056	-2.46	0.014**
Policy Risks	-0.092	0.035	-2.63	0.008**
Market Liquidity	0.187	0.067	2.79	0.005**
GDP Growth	0.132	0.04	3.3	0.001***

The System GMM results indicate that profitability is strongly persistent over time, as shown by the positive and significant coefficient on lagged

profitability ($\beta = 0.512, p < 0.001$). This finding suggests that current profitability is partly shaped by prior-period performance. With respect to the

explanatory variables, price volatility has a significant negative effect on profitability ($\beta = -0.223, p = 0.004$), supporting H1. Exchange rate fluctuations also exert a significant negative effect ($\beta = -0.138, p = 0.014$), supporting H2. Policy risk is likewise negatively associated with profitability ($\beta = -0.092, p = 0.008$), supporting H3. In contrast, market liquidity has a positive and significant effect on profitability ($\beta = 0.187, p = 0.005$), supporting H4, while GDP growth also shows a positive and significant effect ($\beta = 0.132, p = 0.001$), supporting H5. The diagnostic statistics further support model validity, with a Hansen J-test p -value of 0.283 and an AR(2) p -value of 0.146,

indicating acceptable instrument validity and no evidence of second-order serial correlation.

4.3 Value-at-Risk (VaR) Analysis

The Value-at-Risk analysis is used to quantify the downside exposure of selected commodities traded in Vietnam’s commodity markets. Unlike the System GMM model, which estimates how specified factors affect profitability, the VaR analysis measures the potential magnitude of loss for individual commodities under given confidence levels. The VaR results therefore serve as a complementary risk metric that helps contextualize the broader profitability findings.

Table 4: VaR Results for Key Commodities

Commodity	95% VaR (USD)	99% VaR (USD)	Most Volatile Period
Rice	1,250	1,800	Q2 2020
Crude Oil	3,200	4,850	Q1 2022
Aluminum	2,100	3,050	Q4 2021

Relative VaR comparisons show rice carries VaR = 1,250 USD (95%) and 1,800 USD (99%), with peak instability in Q2 2020 during early COVID-19 market frictions. Crude oil holds the largest tails, reporting 3,200 USD (95%) and 4,850 USD (99%), maximised in Q1 2022 amid geopolitical spillovers. Aluminium reflects 2,100 USD (95%) and 3,050 USD (99%), most volatile in Q4 2021, linked to post-pandemic global supply-chain shocks.

4.4 Discussion

The findings present a consistent picture of profitability in Vietnam’s

commodity trading markets. The System GMM estimates show that profitability declines when price volatility, exchange rate fluctuations, and policy risk intensify, but improves when market liquidity and GDP growth are stronger. These results indicate that both market instability and the broader institutional environment are important for explaining trading performance in an emerging market context.

The negative coefficient for price volatility confirms that unstable commodity prices directly weaken profitability by increasing uncertainty in revenues and operating margins. The

negative effect of exchange rate fluctuations suggests that external monetary instability is a material constraint for a trade-linked commodity market. The negative effect of policy risk further indicates that regulatory inconsistency raises operating uncertainty and reduces profit predictability. By contrast, the positive effects of market liquidity and GDP growth show that efficient trading conditions and supportive macroeconomic performance can partially offset these pressures and create a more favorable environment for profitability.

The VaR findings complement these regression results by demonstrating that downside risk is not uniform across commodities. Crude oil exhibits the largest loss exposure, followed by aluminum and rice. This pattern suggests that stakeholders operating in different commodity segments face different levels of tail risk even within the same market environment. Accordingly, the regression results and VaR estimates should be interpreted together: the former identifies the factors associated with profitability, whereas the latter illustrates the severity of loss exposure for specific commodities.

These findings have practical implications for both market participants and policymakers. Traders and producers should place greater emphasis on managing price and exchange-rate exposure, particularly in high-risk commodity segments. Policymakers should improve regulatory predictability and support market liquidity, as these conditions are associated with stronger profitability

outcomes. Overall, the study shows that profitability in Vietnam's commodity trading markets depends not only on controlling direct market risks but also on strengthening the institutional and market conditions in which trading occurs.

5. CONCLUSION

5.1 Summary of Findings

This study examined how key market risk factors and market conditions influence profitability in Vietnam's commodity trading markets over the 2013–2023 period. The System GMM results show that price volatility, exchange rate fluctuations, and policy risk significantly reduce profitability, whereas market liquidity and GDP growth significantly improve profitability. The analysis also reveals substantial persistence in profitability over time. The complementary VaR results indicate that crude oil has the highest downside risk among the selected commodities, followed by aluminum and rice. Taken together, the findings show that profitability is shaped by both direct market instability and the broader quality of trading conditions.

5.2 Theoretical and Practical Implications

From a theoretical perspective, this study contributes to the literature by clarifying which market and macro-level factors are systematically associated with profitability in an emerging commodity-market setting. Rather than advancing claims beyond the estimated model, the study shows that profitability is negatively linked to price volatility, exchange rate

instability, and policy risk, while being positively linked to market liquidity and GDP growth. The study also demonstrates the value of combining a dynamic panel estimator with a downside-risk metric for complementary analytical purposes.

From a practical perspective, the findings suggest that market participants should strengthen risk control in areas most closely associated with reduced profitability, especially price instability, currency exposure, and policy uncertainty. At the same time, policymakers and market operators should support measures that improve liquidity and stabilize the trading environment. The VaR evidence further indicates that risk-management priorities may need to differ across commodities, with crude oil requiring particularly close attention due to its higher downside exposure.

5.3 Limitations and Future Research Directions

This study has several limitations. First, the analysis is limited to the variables included in the empirical model and therefore does not directly test other potentially relevant strategies such as hedging behavior, diversification structure, or technological adoption.

Second, the 2013–2023 period provides a useful longitudinal window, but longer or higher-frequency data could offer a more granular view of market shocks. Third, the VaR analysis is descriptive and complementary, rather than causal. Future research could incorporate direct measures of firm-level risk management practices, compare Vietnam with other emerging commodity markets, and examine whether the effects identified here vary across specific commodity groups or institutional periods.

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Thông tin bài

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Tác giả liên hệ: Phan Khanh Duy