UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

THE ROLE OF STOCK MARKET VOLATILITY IN M&A ACTIVITY: A COMPARATIVE ANALYSIS OF DEVELOPED AND EMERGING ECONOMIES

Ljubljana, October 2025 KIM BOKALIČ

AUTHORSHIP STATEMENT

The undersigned Kim Bokalič, a student at the University of Ljubljana, School of Economics and Business, (hereafter: UL SEB), author of this written final work of studies with the title The role of stock market volatility in M&A activity: a comparative analysis of developed and emerging economies, prepared in collaboration with mentor prof. dr. Črt Kostevc.

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ABSTRACT

This thesis investigates the role of stock market volatility in shaping mergers and acquisitions (M&A) activity, with a focus on comparing developed and emerging economies. M&A deals are an important tool for company growth and market expansion, but financial uncertainty can both discourage investment and create opportunities for acquisitions. Using panel data from 2010 to 2023, the thesis applies regression models to test how volatility, alongside factors such as GDP growth, inflation, and institutional quality, influences the number and value of transactions. The results show that developed economies, supported by stronger financial systems, are more capable of turning moderate volatility into strategic opportunities, while emerging economies remain more sensitive to volatility shocks and instability. These findings highlight the importance of market stability for corporate decision-making and contribute to a deeper understanding of global M&A trends.

KEY WORDS: stock market volatility, mergers and acquisitions, developed economies, emerging economies, financial markets

SUSTAINABLE DEVELOPMENT GOALS



POVZETEK

Ta magistrska naloga raziskuje vlogo volatilnosti delniških trgov pri oblikovanju dejavnosti združitev in prevzemov (M&A) s poudarkom na primerjavi razvitih in nastajajočih gospodarstev. M&A posli so pomembno orodje za rast podjetij in širitev na trge, vendar pa lahko finančna negotovost hkrati odvrača od investicij ali pa ustvarja priložnosti za prevzeme. V magistrskem delu so uporabljeni panelni podatki za obdobje 2010–2023, pri čemer regresijski modeli preverjajo, kako volatilnost skupaj z dejavniki, kot so gospodarska rast, inflacija in institucionalna kakovost, vpliva na število in vrednost M&A transakcij. Rezultati kažejo, da so razvita gospodarstva zaradi močnejših finančnih sistemov bolj sposobna izkoristiti zmerno volatilnost kot strateško priložnost, medtem ko so nastajajoča gospodarstva bolj občutljiva na šoke in nestabilnost. Ugotovitve poudarjajo pomen stabilnosti trgov za korporativno odločanje ter prispevajo k boljšemu razumevanju globalnih trendov na področju združitev in prevzemov.

KLJUČNE BESEDE: volatilnost delniških trgov, združitve in prevzemi, razvita gospodarstva, nastajajoča gospodarstva, finančni trgi

CILJI TRAJNOSTNEGA RAZVOJA



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LIST OF ABBREVIATIONS

1pp – One percentage point
BCL – Brethren of the Common Life
bn – billion
CPI – Consumer Price Index
EFI – Economic Freedom Index
EU – European Union
FDI – Foreign direct investment
FE – Fixed effects
GARCH – Generalized AutoRegressive Conditional Heteroskedasticity
GDP – Gross Domestic Product
HDI – Human Development Index
IMF – International Monetary Fund

k – thousand
M&A – Mergers and acquisitions
n/a – not applicable
OECD – The Organisation for Economic Co-operation and Development
OLS – Ordinary least squares
R – R-Studio
R&D – Research and development
RTA – Regional trade agreements
SUR – Seemingly unrelated regression
UK – United Kingdom
UNDP – The United Nations Development Programme
USD – The United States Dollar
VIF – Variance Inflation Factor

1 INTRODUCTION

Mergers and acquisitions (M&A) are a key feature of modern financial markets. Companies use them to expand, enter new markets, gain access to technologies, or strengthen their competitive position. Because of their scale and impact, M&A activity is closely connected to broader economic and financial conditions. It represents not only an important component of domestic capital markets but also a driver of international capital flows, shaped by economic fundamentals, institutional frameworks, and market dynamics (Erel et al., 2012).

One factor that plays a particularly important role is stock market volatility—the extent to which financial market prices rise and fall. Volatility affects firms' ability to plan and make investment decisions: high uncertainty can discourage acquisitions, while falling valuations may also create opportunities for opportunistic takeovers (Kuzmina, 2021). This dual role makes volatility a complex and potentially non-linear driver of M&A activity.

The purpose of this thesis is to examine how stock market volatility influences M&A activity and whether its impact differs between developed and emerging economies. It analyses how volatility affects the number and value of transactions and interacts with macroeconomic and institutional factors such as GDP growth, inflation, and the Economic Freedom Index. Using multivariate regression models with both linear and non-linear measures of volatility, the analysis controls for key macroeconomic variables and includes development status, year, and country fixed effects to capture structural differences and global shocks. The empirical framework covers twenty countries—ten developed and ten emerging—over the period 2010–2023, providing a comprehensive comparison across market types.

The thesis begins with an introduction followed by key concepts and definitions essential for understanding the link between stock market volatility and M&A activity. It then reviews the main theoretical perspectives and empirical findings from previous research before presenting the research objectives, hypotheses, and overall framework. The subsequent section explains the data, variable selection, and country classification, while the methodological part describes the empirical approach applied in the analysis. The results are then interpreted and discussed in the context of existing literature, and the thesis concludes with a summary of key findings, their implications, and suggestions for future research.

2 KEY CONCEPTS AND DEFINITIONS

This section outlines essential concepts for understanding stock markets and their impact on mergers and acquisitions (M&A) activity. It covers stock market volatility, a key indicator of market uncertainty, and stock market development, which influences economic growth and financial stability. Additionally, it defines M&A activity, highlighting its role in corporate expansion and market consolidation. Lastly, it distinguishes between developed and emerging

economies, explaining how economic conditions shape M&A trends. These definitions provide a foundation for the analysis in the following chapters. Given the interdisciplinary nature of the topic, it is important to first clarify these core concepts to ensure analytical precision and a shared understanding of the key terms used throughout the thesis.

2.1 Stock market volatility

Stock market volatility refers to the degree of fluctuation in stock prices over a specific period, serving as a key indicator of market uncertainty and risk. It reflects the unpredictability of asset returns, influenced by a mix of macroeconomic and microeconomic factors, including economic uncertainty, investor sentiment, market liquidity, and external shocks such as financial crises or policy shifts (Megaritis et al., 2021). Volatility is typically categorized into historical volatility, which measures past price movements, and implied volatility, derived from market expectations embedded in options pricing models like the Black-Scholes model (Mai, 2023). High volatility signals heightened market uncertainty, often prompting investors to reallocate assets or adjust trading strategies. For instance, during periods of economic instability, increased volatility can deter long-term investments due to higher perceived risk, while creating opportunities for speculative trading (Agapova & Kaprielyan, 2020).

2.2 Stock market development

Through improved investor access to financial resources and the encouragement of effective resource allocation, the stock market plays a critical role in promoting economic growth as a platform for the trading and issuance of shares in publicly traded corporations. The relationship between the growth of the stock market and economic expansion is widely known and has been extensively studied. It is acknowledged as a means of producing positive externalities by supporting domestic savings and their quality (Carp, 2012).

Strong market capitalisation, significant stock value exchanged, and a high turnover ratio are traits of a mature stock market that highlight its marked influence on the overall state of the economy. The Romanian experience serves as an example of how efforts to support the development of stock markets are essential to maximising their potential to propel economic growth (Carp, 2012). Important indicators of a stock market's maturity include market capitalisation, stock value traded, and turnover ratio, which reflect the market's function in facilitating access to financial resources, allocating resources optimally, and drawing in both domestic and foreign investors (Carp, 2012).

One key indicator of stock market development is the market capitalisation to GDP ratio, which shows both the ability to diversify risk and the ability to mobilise capital. Aside from liquidity, additional metrics like market size, turnover ratio, and concentration are also used to assess the overall evolution of the stock market. Crucially, studies show that the growth of the stock

market and long-term economic expansion are positively correlated, highlighting the ongoing significance of liquidity as a catalyst for economic success (Levine & Zervos, 1996).

In principle, a well-developed stock market should increase saving and efficiently allocate capital to productive investments, which leads to an increase in the rate of economic growth (Nowbutsing & Odit, 2011). Stock markets facilitate the mobilisation of domestic savings by giving depositors access to a greater variety of financial tools for portfolio diversification. By doing this, they give businesses access to a significant pool of investment money at a comparatively low cost for financing their projects (Dailami & Aktin, 1990).

Liquidity is a fundamental feature of stock markets and plays a crucial role in facilitating investment in productive ventures. As noted by Levine and Zervos (1996), liquid equity markets allow investors to buy and sell assets quickly and at low cost, reducing concerns about being locked into long-term investments. High liquidity lowers the costs associated with long-term capital commitments and mitigates downside risks. Moreover, liquidity is a key indicator of stock market development, reflecting the market's ability to channel funds efficiently (Levine & Zervos, 1996). In liquid markets, investors can diversify risk by purchasing shares in a wide range of firms, and liquidity risk is reduced because investors can sell their holdings to others unaffected by temporary liquidity shocks. This dynamic stability prevents firms from prematurely withdrawing capital to meet short-term financing needs (Nowbutsing & Odit, 2011).

Markets with underdeveloped stock exchanges can still sustain active M&A activity through alternative financing mechanisms such as bank loans, private credit markets, and foreign capital inflows. Kandilov et al. (2017) show that local credit conditions play a crucial role in M&A activity, as improved bank financing lowers borrowing costs and facilitates deal-making, even in the absence of a strong stock market (Kandilov et al., 2017).

Similarly, Fischer (2017) finds that firms in markets with limited equity access often rely on debt financing, internal funds, or private credit institutions for acquisitions, highlighting that M&A remains viable through alternative financial channels (Fischer, 2017).

These findings indicate that stock market depth is not the sole determinant of M&A activity, and broader financial infrastructure—such as banking systems and private capital—must be considered when analysing M&A trends across economies.

2.3 Mergers and acquisitions (M&A) activity

Mergers and acquisitions (M&A) represent the consolidation of corporate entities through various strategic transactions, including mergers, acquisitions, or takeovers, occurring either within national borders or across international frontiers (Rossi & Volpin, 2004). The two terms are not the same, even though they are frequently used interchangeably. With the main goal of creating synergies and improving market positioning, mergers involve the combination of

various businesses to create a novel corporate structure. Acquisitions, on the other hand, involve one business buying another in order to take control of the target business.

The company's primary goal in engaging into an M&A agreement is to work with other companies, which might be more beneficial than going it alone in a market. Additionally, an M&A raises the wealth and return on equity of shareholders while lowering any related expenses, such operating expenditures (Georgios & Georgios, 2011). Maximising shareholder wealth is the second main objective of M&As in order to thrive in the fast-paced, efficient market. Additionally, since they will have greater power and be able to achieve the company's short- and long-term objectives, the management of the company typically favours M&A activities (Gattoufi et al., 2009).

M&A transactions can take place domestically (domestic mergers and acquisitions) or internationally (cross-border mergers and acquisitions). These deals, which have a big impact on the companies involved and the market environment, can be driven by a number of things, including financial advantages, synergies, cost savings, market consolidation, access to new markets, and strategic expansion (Erel et al., 2012).

Notably, M&A deals are one of the most important ways that national champions and international corporations can spur growth and add value. Their goals include reducing competition, boosting industrial productivity, and adapting to technological breakthroughs and industry shocks (Xie et al., 2017).

2.4 Economic context of M&A activity

Understanding the distinctions between developed and emerging economies is crucial for analysing the dynamics of mergers and acquisitions (M&A) activity. These classifications not only reflect differing levels of economic development but also highlight disparities in market stability, institutional maturity, and financial systems—key factors that influence M&A trends globally.

Developed economies are typically characterized by advanced industrialization, high GDP per capita, and well-established financial and institutional systems. These nations benefit from robust economic growth, political stability, and access to cutting-edge technologies, creating an environment conducive to high levels of M&A activity. Importantly, non-economic factors, such as high literacy rates, quality education systems, and access to healthcare, also contribute to their classification as developed economies. For instance, the Human Development Index (HDI), published annually by the United Nations Development Programme (UNDP), evaluates economic progress using indicators such as life expectancy, education, and gross national income per capita, providing a comprehensive measure of development (Herre & Arriagada, 2023). Despite their wealth and stability, developed economies are not homogenous. Countries like Qatar, though boasting high GDP per capita, face challenges such as income inequality

and inadequate infrastructure, illustrating the multifaceted nature of development (Majaski, 2022). Nevertheless, developed nations generally exhibit lower levels of market volatility, providing the stability required for strategic corporate consolidations and cross-border investments. These favourable conditions make them attractive markets for M&A activity.

International organizations such as the UNDP, World Bank, and IMF use differing methodologies and criteria to classify nations, resulting in some variation in definitions. For example, the UNDP relies on HDI thresholds that consider income achievements, longevity, and education to categorize nations as either developed or developing. The World Bank employs specific indicators, such as gross national income per capita, to group countries into income classifications, while the IMF's framework includes additional economic metrics but often lacks transparency in its categorization process (Nielsen, 2011). These inconsistencies in classification highlight the complexities involved in defining developed economies and underline the need to consider a holistic set of indicators rather than relying on GDP alone (Nielsen, 2011).

In contrast, emerging economies are defined by rapid industrialization, significant economic growth, and evolving financial systems. These markets, including regions such as Asia, Latin America, and Eastern Europe, offer high growth potential but are often characterized by lower income levels, higher market volatility, and limited liquidity compared to their developed counterparts (Cakici et al., 2013). Their expanding market capitalization and increasing global trade participation underscore their growing role in the global economy. Emerging economies, however, face unique challenges, including high levels of informality, inequality, and economic instability. Factors such as fluctuating exchange rates, inflation, and dependence on commodity exports make them more vulnerable to external shocks (Ithurbide & Bellaiche, 2019). Despite these risks, the rapid economic growth and industrialization in these nations create opportunities for M&A activity, as businesses seek to capitalize on untapped markets and expanding consumer bases (Duttagupta & Pazarbasioglu, 2021).

The economic disparities between developed and emerging economies significantly influence M&A trends. Developed markets, with their mature financial infrastructure and low volatility, provide a stable environment for high-value transactions. In contrast, emerging markets, while offering high growth potential, present additional risks due to economic instability and market unpredictability. These differences underscore the importance of tailoring M&A strategies to the specific economic contexts of these regions.

3 THEORETICAL CONTEXT AND EMPIRICAL EVIDENCE

The relationship between stock market volatility and M&A is complex and influenced by multiple economic and financial factors. While prior research has explored macroeconomic determinants of M&A, the role of volatility as either a deterrent or catalyst remains

underexamined. This chapter blends theoretical perspectives, empirical evidence, and gaps in the literature to establish a foundation for the present thesis.

First, the theoretical perspectives section outlines key frameworks explaining how volatility affects financial intermediation, market liquidity, investment decisions, and economic growth. Next, the literature review summarizes empirical findings on volatility's influence on M&A across different economies, highlighting variations between developed and emerging markets. Finally, the gaps in the literature section identifies areas requiring further investigation, including the long-term impact of volatility on post-merger stability, cross-border M&A dynamics, and the moderating role of financial infrastructure.

3.1 Theoretical perspectives

This thesis investigates the impact of stock market volatility on M&A activity in developed and emerging economies. While M&A activity is influenced by a range of macroeconomic and financial variables, the role of volatility remains underexplored. Existing research predominantly focuses on factors such as GDP growth, market capitalization, inflation, and financial development, while limited attention has been given to how volatility—an indicator of market uncertainty—shapes M&A decisions. The purpose of this thesis is to bridge this gap by examining whether volatility acts as a deterrent to M&A activity in uncertain market conditions or whether it serves as an enabler by creating acquisition opportunities. To achieve this, the following theoretical frameworks provide essential insights into how volatility interacts with financial markets, investment behaviour, and economic growth.

The Financial Intermediation Theory highlights the critical role of financial institutions in capital allocation, particularly in the context of M&A transactions. Traditional theories of intermediation emphasize how banks and financial intermediaries facilitate investment by reducing transaction costs and mitigating asymmetric information (Allen & Santomero, 1998). However, recent developments in financial markets have led to a shift toward risk transfer and securitization, where intermediaries increasingly focus on managing market volatility rather than merely channelling funds. In an M&A context, high volatility can disrupt this process by increasing uncertainty, thereby discouraging deal financing and reducing the availability of credit. Conversely, periods of lower volatility enable intermediaries to efficiently allocate resources, enhancing M&A activity.

The Market Microstructure Theory provides further insights into the mechanisms through which volatility influences M&A dynamics. This theory examines how trading mechanisms, bid-ask spreads, and market liquidity shape short-term price behaviour, directly impacting corporate acquisition strategies (Stoll, 2003). In highly volatile markets, increased bid-ask spreads and lower market depth create uncertainty, making it more challenging for firms to execute M&A deals efficiently. Moreover, M&A announcements themselves often induce temporary spikes in volatility, affecting market liquidity and trading conditions. This feedback

loop underscores the importance of market structure in determining the feasibility of corporate acquisitions.

From a broader macroeconomic perspective, Endogenous Growth Theory explains how financial market stability contributes to long-term economic growth. This framework suggests that sustained investment in innovation and technology drives productivity growth, but excessive volatility can deter such investment by increasing risk and reducing investor confidence (Onyimadu, 2015). In stable markets, firms are more likely to pursue M&A as a strategy for acquiring intellectual capital and enhancing productivity. This aligns with the hypothesis that market stability fosters an environment conducive to corporate restructuring and consolidation.

Similarly, Solow's Growth Theory emphasizes the role of capital accumulation and technological progress in driving economic growth (Schilir`o, 2018). However, this theory also acknowledges that volatility can disrupt capital investment, thereby slowing economic expansion. In the context of M&A, excessive market fluctuations can increase the cost of capital, making it more difficult for firms to finance acquisitions. On the other hand, moderate levels of volatility can enhance price discovery, enabling firms to identify strategic acquisition targets at optimal valuations.

Together, these theoretical frameworks illustrate the complex relationship between stock market volatility and M&A activity. They highlight how volatility affects financial intermediation, market liquidity, investment behaviour, and long-term economic growth. By integrating these perspectives, this thesis seeks to provide a comprehensive understanding of how market conditions influence M&A trends in both developed and emerging economies.

3.2 Literature review

Mergers and acquisitions (M&A) drive corporate growth, market consolidation, and financial development. While influenced by macroeconomic, financial, and firm-level factors, financial market stability is a key enabler, facilitating access to capital and reducing investor risk aversion. However, stock market volatility introduces uncertainty that could affects deal volume, pricing, and completion rates, making it an important but underexplored factor in M&A dynamics.

The impact of volatility on M&A varies across economies. Emerging markets, with lower financial depth and higher information asymmetry, are more sensitive to volatility (Zhu et al., 2014). While extreme volatility can deter M&A due to valuation risks and financing constraints, moderate fluctuations may create acquisition opportunities by allowing firms to acquire undervalued targets. Despite these mixed findings, existing research lacks a clear consensus on how volatility interacts with M&A activity across different market environments.

This thesis aims to bridge this gap by examining the role of stock market volatility in shaping M&A activity in developed and emerging economies. By analysing how volatility interacts with key macroeconomic indicators such as GDP per capita, inflation, market capitalization, and real GDP growth, this research contributes to a more nuanced understanding of its influence on M&A patterns. This review combines key findings from existing literature, laying the groundwork for the empirical analysis that follows, which seeks to determine whether volatility serves as a deterrent or an enabler of M&A activity under different economic conditions.

Research has identified multiple determinants shaping M&A trends across economies. Economic stability and financial market development are fundamental drivers of deal volume and value, as stable macroeconomic conditions enhance investor confidence and facilitate access to capital. Erel (2012) finds that cross-border M&A activity is particularly sensitive to stock market performance, exchange rate fluctuations, and GDP growth, with acquiring firms often originating from stronger-performing economies due to enhanced access to capital and well-developed financial markets. Their study further suggests that firms in stable economic environments are more likely to pursue acquisitions as a means of expanding operations and increasing profitability. Similarly, Xie et al. (2017) emphasize the importance of institutional quality, tax policies, and investor protection in fostering cross-border transactions, highlighting that regulatory environments significantly influence deal execution by reducing transaction costs and mitigating risks associated with cross-border acquisitions. Their findings indicate that countries with stronger legal frameworks attract a higher volume of M&A deals, as firms from these markets perceive reduced uncertainty and greater enforcement of contractual obligations.

Corporate governance also plays a crucial role in determining M&A activity**.** Rossi and Volpin (2004) show that countries with stronger investor protection mechanisms experience higher levels of M&A transactions, as well-regulated financial markets reduce information asymmetry and enhance transparency. This suggests that firms operating in economies with robust legal frameworks and corporate governance standards are more likely to engage in M&A due to lower associated risks. Additionally, well-functioning capital markets enable efficient pricing of target firms, further incentivizing acquisition activity.

At the firm level, financial health and strategic positioning influence M&A engagement. Beccalli and Frantz (2013) find that in the banking sector, larger banks with high growth potential and lower capitalization are more likely to be acquirers, whereas weaker, undercapitalized institutions tend to be acquisition targets. Similarly, Xie et al. (2017) highlight that firms in countries with weaker legal protections often become targets for firms from jurisdictions with stronger governance, illustrating how regulatory disparities drive cross-border M&A dynamics.

Given these determinants, accurately measuring M&A activity is essential for assessing trends and evaluating its drivers. Several indicators are widely used in empirical research. One of the most common measures is M&A deal volume, which reflects the number of completed

transactions within a given period and serves as a direct gauge of market activity (Xie et al., 2017). Another key metric is total M&A value, which captures the aggregated financial worth of M&A deals and provides insights into transaction scale and economic impact (Rossi & Volpin, 2004)**.** These measures help contextualize fluctuations in M&A activity, particularly in response to external shocks such as financial crises, regulatory shifts, and periods of heightened market volatility.

Understanding the fundamental drivers of M&A activity establishes the basis for evaluating the role of stock market volatility in shaping these trends. The relationship between volatility and M&A decisions remains a subject of debate, with some scholars arguing that heightened volatility deters transactions due to increased uncertainty, while others suggest that it creates opportunities for well-capitalized firms to acquire undervalued targets. The following section delves deeper into this complex relationship, examining how volatility influences M&A patterns across developed and emerging economies.

Stock market volatility plays a complex role in shaping M&A activity. While financial market stability is often considered a key driver of M&A, volatility introduces uncertainty that can influence deal volume, pricing, and completion rates. The impact of volatility varies across economies, with emerging markets displaying heightened sensitivity due to lower financial depth and greater information asymmetry (Zhu et al., 2014).

Financial market depth is a crucial moderating factor in the volatility - M&A relationship. Di Giovanni (2005) finds that stock market capitalization relative to GDP enhances cross-border M&A flows, reinforcing the idea that financially deep markets provide a more stable environment for corporate acquisitions. However, Barakat et al. (2015) show that macroeconomic indicators such as exchange rates, interest rates, and money supply interact with volatility to influence investment decisions, suggesting that volatility alone does not fully explain M&A trends. Institutional quality and governance also play a role, as Pessanha et al. (2016) highlight how investor confidence and market transparency moderate the impact of volatility on M&A activity.

Studies on volatility and M&A trends present mixed findings. On one hand, Tabash et al. (2024) use GARCH models to demonstrate that volatility shocks persistently deter M&A transactions by increasing financing constraints. Tripathy and Garg (2013) further confirm that volatility clustering leads to prolonged market instability, discouraging corporate restructuring. On the other hand, Kuzmina, (2021) argues that moderate volatility creates acquisition opportunities, as well-capitalized firms exploit mispricing to acquire undervalued assets. Pessanha et al. (2016) further support this, showing that well-funded banks leverage volatility-induced price fluctuations to execute strategic acquisitions. These findings suggest a nonlinear relationship—moderate volatility may stimulate M&A activity, whereas extreme volatility deters it.

Empirical research on the volatility - M&A relationship employs various methodologies. GARCH models are widely used to assess volatility persistence (Barakat et al., 2015; Tripathy & Garg, 2013) Event studies analyse M&A announcement effects on stock prices (Pessanha et al., 2016; Zhu et al., 2014). Cross-country regression analyses compare M&A activity under different volatility conditions **(**Di Giovanni, 2005; Kuzmina, 2021). Panel data methodologies further examine firm-level determinants of M&A (Zhu et al., 2014**;** Tabash et al., 2024). However, despite extensive empirical work, findings remain inconsistent, warranting further methodological refinements to fully capture the intricate relationship between volatility and M&A decisions.

The literature also highlights disparities in the effects of volatility across developed and emerging economies. Di Giovanni (2005) finds that financial deepening enhances M&A activity in developed markets, while emerging markets experience weaker investor confidence during volatile periods. Zhu et al. (2014) emphasize that idiosyncratic volatility in emerging economies plays a disproportionately larger role due to increased information asymmetry. Tabash et al. (2024) reveal that financial crises amplify volatility's impact on M&A transactions in emerging markets, where firms lack the financial resilience of their developed-market counterparts. Meanwhile, Kuzmina (2021) suggest that firms in advanced economies are better equipped to hedge against volatility, making them more resilient to its effects.

3.3 Gaps in the literature

Despite substantial research on the relationship between stock market volatility, development, and mergers and acquisitions activities, several gaps remain.

First, most research on M&A in less developed markets has focused on acquisition premiums and deal completion rates, while only a few studies, such as Zhu et al. (2014), have examined the effects of idiosyncratic volatility in emerging markets. However, much less is known about how idiosyncratic volatility interacts with cross-border M&A activity in developed economies, particularly during periods of financial crisis. According to studies like Tabash et al. (2024), established and emerging economies respond differently to market shocks like the COVID-19 pandemic and the 2008 financial crisis. These results, however, necessitate more research into the ways in which these shocks affect the volatility-driven decision-making process for M&A operations in different geographical areas.

Second, the majority of the work now in publication, such as research by Pessanha et al. (2016), focusses on the immediate volatility effects of M&A announcements. However, Yuan et al. (2020) point out that little is known about the long-term impacts of volatility reductions brought on by post-merger yield stabilisation. This disparity highlights the need for long-term research looking at the effects of post-merger stabilisation on firm performance and market dynamics across industries and regions.

Third, the relationship between volatility and financial infrastructure has not received enough attention, despite the fact that financial deepening has been well established as a driver of cross-border M&A transactions (Di Giovanni, 2005). To better understand the circumstances under which volatility encourages or discourages M&A activity, for instance, a more thorough examination of the mitigating role that robust financial institutions have in counteracting the negative consequences of excessive volatility, especially in emerging economies, is necessary.

Last but not least, several studies—including those by Kuzmina (2021)—have highlighted the advantageous circumstances that established markets offer for M&A activity, such as reduced volatility and increased liquidity. The institutional and regulatory elements that might either increase or decrease the impact of volatility on M&A outcomes, however, have received less attention. Research on how macroeconomic variables like CPI, currency rates, and interest rates interact with volatility to influence the M&A landscape is necessary in developing economies, because these variables are important (Barakat et al., 2015).

Addressing these gaps would improve our comprehension of the complex ways that stock market volatility influences M&A activity and provide us more insight into the factors that either facilitate or obstruct successful corporate consolidations in both developed and emerging nations.

4 RESEARCH OBJECTIVE AND HYPOTHESIS

Understanding the factors that drive M&A activity is essential for analysing financial markets and corporate strategy. While various economic and market conditions influence deal-making, certain aspects remain less explored, warranting further investigation. This section outlines the research objective and hypothesis, focusing on the relationship between market dynamics and M&A activity across different economic contexts.

4.1 Research objective

The primary objective of this research is to investigate the impact of stock market volatility on M&A activity and to understand how this relationship varies between developed and emerging economies. Specifically, the research aims to explore the role of stock market characteristics—such as trading volume, and volatility—in influencing M&A activity across different economic contexts.

The research will address the following key questions: Does stock market volatility lead to lower M&A activity? Is the relationship between stock market volatility and M&A activity stronger in developed economies compared to emerging economies? How do macroeconomic factors, such as GDP and inflation, interact with stock market characteristics to influence M&A activity?

Among these questions, the relationship between stock market volatility and M&A activity has received relatively little attention in the literature, presenting an opportunity for this thesis to contribute new insights. By examining stock market characteristics, this thesis seeks to determine if these factors are more prominent in countries with higher economic output and if they facilitate or hinder M&A activity. In particular, well-developed stock markets with low volatility may provide better access to capital, greater transparency, and higher investor confidence, all of which are crucial for M&A transactions. By comparing the financial and economic dynamics of developed and emerging economies, this thesis aims to provide a comprehensive understanding of the factors driving M&A activity, thereby contributing to a deeper insight into the global financial landscape.

4.2 Hypothesis

This thesis hypothesizes that countries with well-developed and stable stock markets experience greater M&A activity. Specifically:

H: Countries with lower stock market volatility experience greater M&A activity compared to those with higher stock market volatility, after controlling for other factors relevant in determining the extent of M&A activity.

By analysing these financial metrics and accounting for economic size and other variables, the research aims to demonstrate that market stability is a significant factor in facilitating increased M&A transactions. This focus on volatility as a key aspect of stock market development aims to fill an important gap in existing research, offering a deeper understanding of how market stability influences M&A transactions in different economic contexts. This hypothesis seeks to establish a clear link between stock market maturity, stability, and M&A intensity, providing valuable insights for policymakers and investors in both developed and emerging economies.

5 RESEARCH FRAMEWORK

This section outlines the research framework used to analyse the relationship between stock market volatility and M&A activity. Given the complexity of financial markets and M&A dynamics, a structured approach is necessary to capture the interplay of macroeconomic conditions, market performance, and deal-making trends. The framework begins with an introduction to the multivariate model employed in the analysis, explaining its relevance and alignment with previous research. It then defines the dependent and independent variables, ensuring their selection is grounded in empirical literature and reflects key economic and financial indicators. Finally, the country selection process is described, detailing the criteria used to classify economies into developed and emerging groups. Each selected country is also examined individually to provide context for its inclusion in the thesis. Together, these components establish a solid foundation for the empirical investigation, ensuring methodological rigor and relevance to real-world financial environments.

5.1 Model introduction

To examine the relationship between stock market volatility and M&A activity, this thesis employs a multivariate model that integrates key macroeconomic and financial variables. Given the complexity of M&A dynamics, a multivariate approach is necessary to capture the interplay between economic conditions, market performance, and deal-making activity. Similar modelling approaches have been utilized in prior studies, particularly those assessing M&A trends across different economic environments (Erel et al., 2012; Rossi & Volpin, 2004; Xie et al., 2017).

The model focuses on two dependent variables: M&A Value and Number of Deals, both of which are widely used in empirical studies to measure M&A activity (Rossi & Volpin, 2004; Xie et al., 2017). In this thesis, I use M&A Value to represent the total announced value of all mergers and acquisitions involving companies from a given country. This measure is taken directly from the Refinitiv database, where it serves as a standard indicator for comparing the overall scale of M&A activity across countries and over time. To complement this, I include the Number of Deals, which reflects how often M&A transactions occur. By considering both the value and frequency of deals, I aim to capture a more complete picture of M&A dynamics, accounting for both the magnitude and the intensity of market activity.

The independent variables in this thesis include Stock Market Volatility (and its squared term), GDP per Capita, Real GDP Growth, Inflation, the Economic Freedom Index, and Foreign Direct Investments. Each of these factors has been identified in previous research as influencing M&A trends. Stock Market Volatility introduces uncertainty into financial markets, potentially deterring deal-making due to valuation risks and financing constraints (Tripathy & Garg, 2013; Tabash et al., 2024), though some studies suggest it may create acquisition opportunities for well-capitalized firms (Kuzmina, 2021). To capture this potential non-linear effect, the model includes a squared volatility term, reflecting the hypothesis that moderate volatility might encourage acquisitions, while high volatility could have a dampening effect.

Market Capitalization is conceptually included as a proxy for financial market depth, with deeper markets typically facilitating higher M&A activity (Di Giovanni, 2005; Erel et al., 2012). However, it is strongly linked to many of the same factors that influence M&A activity—such as the state of the economy, institutions, and investor confidence. Because of this, it is considered endogenous, meaning it could both affect and be affected by M&A activity. Including such a variable in a regression model can lead to misleading results, because it breaks the assumption that the explanatory variables should not be connected to the error term. For example, it's possible that higher M&A activity leads to higher market capitalization, not just the other way around. To avoid this issue, Market Capitalization was excluded from the final regression models but remains discussed in the conceptual framework of the thesis due to its theoretical relevance.

GDP per Capita and Real GDP Growth reflect economic strength and expansion, both of which have been linked to increased M&A activity (Barakat et al., 2015; Xie et al., 2017). Finally, Inflation can impact M&A by influencing borrowing costs and corporate valuation strategies (Pessanha et al., 2016; Zhu et al., 2014). The Economic Freedom Index is included to capture the broader institutional environment and regulatory openness, which are known to influence cross-border investment decisions, as reflected in related studies that incorporate governance quality and regulatory indicators (Tunyi & Ntim, 2016; Di Giovanni, 2005). Net Foreign Direct Investments—representing the difference between outward and inward FDI flows—are used to capture the overall international investment engagement of a country. As highlighted by Xie et al. (2017), the net direction and scale of FDI flows can reflect a country's dual role as both a source and destination of capital, influenced by institutional quality, market development, and macroeconomic fundamentals. Including this variable helps examine whether countries that are more integrated into global investment flows also exhibit higher M&A activity.

Mathematically, the model is represented as:

$$M\&A\ Activity\ =\ \beta_0 +\ \beta_1\ Volatility_{it} +\ \beta_2\ Volatility_{it}{}^2 + \beta_3\ Market\ Capitalization_{it} +\ \beta_4\ Real\ GDPgrowth_{it} +\ \beta_5\ GDP\ per\ capita_{it} + \beta_6\ Inflation_{it}\ +\beta_7\ Economic\ Freedom\ Index_{it} + \beta_8\ FDI_{it} + \gamma_{it} + \delta_{it} + \varepsilon_{it} \quad (1)$$

where M&A Activity is measured using M&A Value and Number of Deals. This approach aligns with existing empirical frameworks used in cross-country M&A research (Di Giovanni, 2005; Kuzmina, 2021).

Each independent variable is expected to have distinct effects on M&A activity. Stock Market Volatility is hypothesized to have a negative impact due to increased uncertainty; however, moderate volatility could encourage acquisitions. To capture this non-linear relationship, a squared volatility term has been included in the model, allowing the analysis to reflect both the potentially beneficial and harmful effects of different volatility levels. GDP per Capita and Real GDP Growth are likely to be positively correlated with M&A activity, as economic expansion typically fosters corporate consolidation. Inflation, however, may have an ambiguous effect, depending on whether rising costs deter investment or encourage firms to hedge against currency depreciation through acquisitions. The Economic Freedom Index is included to reflect the institutional and regulatory environment of a country, with higher levels of economic freedom expected to facilitate M&A activity by reducing barriers to entry, improving investor confidence, and supporting a more competitive business climate. FDI's are also included as a measure of cross-border investment flows, helping to assess whether countries that attract more foreign capital also exhibit greater M&A activity. To account for unobserved differences across countries and over time, the model includes a dummy variable indicating country development status (1 for emerging, 0 for developed) and year fixed effects. This helps control for country-specific characteristics and global shocks that may influence all countries in a given year, reducing the risk of biased estimates.

This model builds on previous research while contributing a comparative analysis of developed and emerging economies. By incorporating volatility alongside macroeconomic indicators, it seeks to clarify whether volatility acts as a deterrent or enabler of M&A activity and how this relationship varies across different financial environments. The following section will outline the empirical methodology used to estimate and test the model, ensuring robustness in its application to real-world M&A data.

5.2 Variable selection

For the empirical analysis, I have selected a range of variables based on prior literature, ensuring that they offer a comprehensive perspective on the factors influencing M&A activity across both developed and emerging countries. These variables encompass key economic indicators, market dynamics, and transaction-specific metrics that are crucial for understanding how macroeconomic conditions impact M&A trends.

The dependent variables for this thesis are the Value of M&As and the Number of M&A Deals, which capture the scale and frequency of M&A activity. These measures have been widely used in prior studies analysing M&A dynamics (Xie et al., 2017; Rossi & Volpin, 2004).

The independent variables were selected based on the frequency with which they appear in the relevant literature and their theoretical relevance to the model:

- Real GDP Growth (%): Economic growth has been linked to increased M&A activity as expanding economies tend to encourage corporate expansion and acquisitions (Erel et al., 2012).
- GDP per Capita (USD): Serves as a measure of economic development and purchasing power, influencing M&A activity in emerging markets (Zhu et al., 2014).
- Inflation Rate (%): Affects borrowing costs and corporate valuations, making it a key determinant in M&A decisions (Impact of Macroeconomic Variables on Stock Markets).
- Economic Freedom Index (scale 1-10): or closely related institutional indicators such as regulatory quality and governance effectiveness, has been used in prior research to capture the business environment's role in shaping investment flows and M&A activity, particularly in cross-country settings where institutional differences significantly affect deal dynamics (Tunyi & Ntim, 2016; Di Giovanni, 2005).
- Foreign Direct Investments (Net, USD): Reflects the balance of cross-border investment positions and serves as an indicator of international capital mobility, which can shape M&A patterns across countries (Xie et al., 2017).
- Volatility (%): Market uncertainty plays a significant role in shaping M&A decisions, with evidence suggesting both deterrent and opportunistic effects (Zhu et al., 2014; Tabash et al., 2024). In line with financial literature (e.g., Tripathy & Garg, 2013; Tabash et al., 2024), stock market volatility in this thesis is calculated from daily returns derived from closing prices. While some studies apply GARCH-based models to model conditional volatility,

my thesis adopts a widely used realized volatility approach. Specifically, daily returns were used to compute the standard deviation of market fluctuations, which was then annualized by multiplying daily volatility by the square root of the number of trading days. This method is frequently employed in financial research and aligns with industry practices, providing a transparent and interpretable measure of volatility.

These variables provide a strong empirical foundation for analysing M&A trends while ensuring consistency with previous studies. To maintain robustness in estimation and avoid small-sample econometric issues, data from 2010 to 2023 will be utilized. This period is chosen to capture post-financial crisis recovery, global economic cycles, and variations in stock market volatility. Earlier periods, such as the financial crisis itself, are not included in the analysis, as their inclusion would introduce complex and multi-layered effects on the correlation between M&A activity and market volatility.

Table 1: Summary of selected variables and data sources for empirical analysis

Variable	Description	Source	Calculation/Notes
M&A Value (USD)	Total value of mergers and acquisitions (in USD).	Refinitiv (2024 f)	N/A
Number of M&A Deals	Total number of M&A transactions.	Refinitiv (2024 f)	Denoted as #Deals
Real GDP Growth (%)	Annual percentage change in real GDP.	IMF (2024 b)	N/A
GDP per Capita (USD)	GDP per person in current prices (USD).	IMF (2024 a)	N/A
Inflation Rate (%)	Annual average change in consumer prices.	IMF (2024 c)	N/A
Volatility (%)	Annual volatility of stock market indices based on daily returns.	Refinitiv (2024 g-z) (Calculated)	Calculated from daily closing prices, with daily returns, standard deviation, and annualized by multiplying daily volatility by the square root of the trading days.

To be continued

Table 2: Summary of selected variables and data sources for empirical analysis (cont.)

Variable	Description	Source	Calculation/Notes
Economic Freedom Index (scale 1-10)	Measures the degree to which a country's policies support open markets, property rights, and limited government.	Fraser institute (2024 e)	Denoted as EFI; Higher values indicate greater levels of economic freedom.
Net Foreign Direct Investments (USD)	Net amount of long-term foreign investment coming into a country, including earnings reinvested and other capital (in USD).	World Bank (2024 d)	Denoted as FDI.

Source: own work.

This selection ensures that the thesis captures the macroeconomic, financial, and market-specific factors influencing M&A activity while maintaining alignment with established empirical research. The next section will outline the econometric model used to analyse these relationships.

5.3 Country selection

I have chosen to include ten developed and ten emerging economies in this comparative research. The selection is based on the classification systems of the World Bank and the International Monetary Fund (IMF), ensuring that developed countries are recognized by the World Bank as high-income and classified by the IMF as developed, while emerging economies are those classified by the World Bank as upper middle-income and by the IMF as emerging/developing.

The choice of ten developed and ten developing countries is driven by both data availability and the need for a balanced and representative sample. While it was possible to identify more developed countries that met the criteria and had complete data for the entire period, the same was not true for developing economies. Only ten emerging countries had the necessary data coverage across the full timeframe, limiting the feasible sample size. Countries such as Argentina, Belarus, Georgia, Botswana, and others were considered, but many were excluded due to missing or incomplete data. While countries like India and Russia are often among the firsts to come to mind when thinking about emerging economies, they were excluded based on

the World Bank income classification — India is categorized as a lower-middle-income economy, and Russia as a high-income economy — and therefore did not meet the inclusion criteria for this analysis.

At the same time, selecting a total of twenty countries provides a large enough sample to ensure sufficient heterogeneity while maintaining comparability between the two groups. The sample includes countries from various regions worldwide, allowing for a broader analysis of how different markets react to stock market volatility. By ensuring geographic diversity, the thesis captures potential variations in market behaviour across different economic environments.

Furthermore, the selected twenty countries account for approximately 78% of global GDP in 2023, reinforcing the representativeness and generalizability of the thesis. By covering a substantial portion of the world economy, this selection ensures that the findings provide meaningful insights into the relationship between stock market volatility and M&A activity across both developed and emerging economies.

5.3.1 Emerging economies:

The selection of ten emerging economies is based on the World Bank and IMF classifications, ensuring all included countries meet the criteria of upper middle-income and emerging/developing. Additionally, data availability for the entire research period was a key factor. The final selection ensures a diverse and representative sample while maintaining data consistency, allowing for a robust analysis of stock market volatility and M&A activity across emerging economies.

5.3.1.1 China

China is recognized as an emerging economy due to its rapid economic growth, often exceeding 10% annually, and its transition from an agrarian-based society to an urbanized and industrialized nation (Kanwit, 2023). In addition, continuous economic development and evolving demographics since the late 1970s also contribute to this classification. Furthermore, international organizations such as the World Bank and IMF classify China as an 'upper middle income' and 'emerging and developing economy', respectively, considering factors like per capita income and persistent poverty issues (Kanwit, 2023). Despite China's prominence as a major manufacturing hub, it grapples with significant challenges, including inadequate access to basic necessities like water, sanitation, and education. These factors, coupled with China's historical classification as a developing nation, solidify its status as an emerging economy (Kanwit, 2023).

5.3.1.2 Brazil

Brazil is considered an emerging economy due to its growing and resilient economy, making it an attractive investment opportunity for global investors. The country's GDP has been steadily increasing, reflecting its economic growth and potential for further development. Significant transformation in the early 21st century, including a shift from financial instability to relative price stability and fiscal responsibility, has positioned Brazil as a key player in the global economy (Bajpai, 2023). Despite challenges such as an uncompetitive exchange rate and deficiencies in investment, human capital, and infrastructure, Brazil's economic performance and progress in various sectors highlight its transition from a developing nation to a more advanced economy with increasing global influence (Amann & Baer, 2012).

5.3.1.3 Turkey

Turkey is classified as an emerging economy due to its ability to maintain market access and attract foreign investment, even in the face of economic challenges, showcasing its resilience (Keay, 2024). Recent efforts to revitalize the economy through a new economic team highlight the country's adaptability, a hallmark of emerging markets (Keay, 2024). Positioned strategically between Europe and Asia, Turkey's role in global trade is further strengthened by its geographic advantages (Keay, 2024). In financial markets, Turkey has seen positive inflows and declining bond yields, reflecting increased investor confidence (Mellow, 2023). The central bank’s decision to sharply raise interest rates in response to high inflation demonstrates a shift toward orthodox economic policies, indicating a maturing economy (Mellow, 2023). Coupled with an undervalued stock market that presents significant growth opportunities, these developments underscore Turkey’s resilience and potential, solidifying its status as an emerging market (Mellow, 2023).

5.3.1.4 Malaysia

Malaysia is classified as an emerging economy due to its continued development and the interaction of state policies with market forces. Since independence, it has achieved rapid poverty reduction and structural change, notably through the growth of the Malay middle class (J. Fischer & Nisa, 2025). Although nearing high-income status, Malaysia remains upper-middle-income and faces challenges such as inequality and wealth concentration (J. Fischer & Nisa, 2025) . The state’s emphasis on competitiveness—especially within the halal economy—has spurred the growth of middle-class consumer markets and enterprise development, positioning Malaysia as a central player in the emerging Muslim global economy (Jordaan, 2018). At the same time, the active role of government policy in creating a modern middle class through education, civil service employment, and strategic economic reforms reflects the country’s transitional status as an emerging economy, characterized by both dynamism and structural limitations (J. Fischer & Nisa, 2025).

5.3.1.5 Mexico

Mexico is considered an emerging economy due to its rapid industrialization, urbanization, and overall economic growth. Its GDP reflects significant economic development and potential for further growth. Although facing challenges in maintaining historical growth rates, Mexico's ongoing efforts to attract multinational investment highlight its potential for faster economic advancement (Reiff, 2022). The country's GDP ranking, and structural changes are typical of developing economies, but its growth trajectory and economic diversification signify its transition towards higher-income status. Despite concerns about economic stability, Mexico's potential to capture significant investment reinforces its classification as an emerging market economy (Zaga & Arias Novelo, 2024).

5.3.1.6 Columbia

Colombia is an emerging economy due to its trade liberalization efforts and economic integration since the 1990s, including signing numerous regional trade agreements (RTAs). These measures have diversified exports and improved labour productivity but left the country reliant on mineral fuel exports, making it vulnerable to energy price fluctuations (Abreo, 2024).

In 2024, sectors like agriculture and public administration showed growth, but weaknesses in private investment and manufacturing persist. High inflation, fluctuating exchange rates, and low investor confidence further highlight structural challenges, reflecting the opportunities and vulnerabilities typical of emerging economies (Barone González & Zaga, 2024).

5.3.1.7 Indonesia

Indonesia is an emerging economy with its vast natural resources, young population, and increasing consumer market driving economic growth. The nation has transitioned from a commodity-export-driven model to one entered on domestic consumption and services. Strategic policies, such as banning raw material exports to boost local processing industries, have attracted foreign investment, particularly in the nickel and cobalt sectors vital for electric vehicle batteries (Tilley, 2021).

Despite its progress, challenges like corruption, low productivity, and infrastructure gaps persist. However, Indonesia’s large, urbanizing population and focus on digitalization present opportunities for sustained growth, positioning the country as a rising powerhouse in Asia (Humas, 2024).

5.3.1.8 Kazakhstan

Kazakhstan's classification as an emerging economy stems from its transformation from a Soviet-era socialist state to a market-driven society. This transition has been fuelled by its

wealth in natural resources, particularly oil and gas, which constitute a significant portion of its GDP. However, this reliance makes Kazakhstan vulnerable to global commodity price fluctuations. Despite these challenges, the country has achieved remarkable economic growth, with GDP per capita increasing six-fold between 1999 and 2007. This growth was supported by strategic reforms, including mortgage expansion and infrastructure investments (An et al., 2021; Konings et al., 2023).

Moreover, Kazakhstan's economic structure is characterized by the dominance of a few large firms, particularly in resource-driven sectors, contributing disproportionately to GDP growth. While this granularity highlights its economic potential, it also exposes the economy to risks from sector-specific shocks. The nation’s focus on transitioning to a diversified, market-oriented economy further underscores its status as an emerging economy (Konings et al., 2023).

5.3.1.9 South Africa

South Africa is classified as an emerging economy due to its position as "Africa’s most industrialized economy, natural resource endowments, investments in other African countries, and diplomatic clout" (Chivvis et al., 2023). As a member of BRICS, it is recognized as one of the key emerging economies contributing to "about a quarter (23.2%) of global GDP in nominal terms and about a third (32%) in purchasing power parity terms" (Mensi et al., 2021).

The country plays a significant role in global commodity markets, particularly as one of the largest suppliers of gold. However, "the fast economic growth rates of the BRICS countries, including South Africa, have been accompanied by some of the fastest growing demands for commodities," which exposes them to high market volatility (Mensi et al., 2021). Despite these challenges, South Africa’s industrial base and global partnerships position it as a vital player in the emerging world order (Chivvis et al., 2023).

5.3.1.10 Thailand

Thailand is classified as an emerging economy due to its reliance on trade, a growing manufacturing sector, and its exposure to global uncertainties. The country’s open economy structure makes it "highly susceptible to external shocks," with global uncertainty delivering "deeper and more long-lasting effects" compared to domestic uncertainty, particularly in financial markets and trade flows (Apaitan et al., 2022). Thailand's exports are a key driver of its GDP, but they expose the economy to global market volatility and shifting demand trends (Bajpai, 2022).

Moreover, domestic uncertainties, such as political instability and fiscal policy challenges, have significantly influenced investment and trade. Political uncertainty, for example, "generates relatively large declines in real economic activity, even in the long run" (Apaitan et al., 2022). Despite these challenges, the country has managed to maintain steady economic

growth, leveraging its competitive manufacturing sector and strategic location in Southeast Asia to attract foreign investment and sustain its export-driven economy (Bajpai, 2022).

5.3.2 Developed economies

The ten developed economies included in this thesis were selected based on IMF and World Bank classifications, ensuring they are recognized as high-income and developed markets. The selection also considers geographic diversity, economic representativeness, and data availability over the entire research period. By including countries from different regions, the thesis captures potential variations in stock market volatility and M&A activity across diverse financial environments. While other developed economies meet the classification criteria, the final selection balances heterogeneity and analytical feasibility, ensuring a comprehensive yet manageable dataset.

5.3.2.1 Switzerland

Switzerland is considered a developed economy due to its high GDP and GDP per capita, advanced infrastructure, and strong financial sector. The country consistently ranks high on the Human Development Index (ranked 1st with a score of 0.967 in 2022 (UNDP, 2024)), reflecting its high quality of life, excellent healthcare, and education systems. Political stability, low unemployment and poverty rates, and a highly skilled workforce further contribute to its economic prosperity (Turuban, 2024). Switzerland's heavy investment in research and development fosters innovation, while its robust export economy, particularly in pharmaceuticals, machinery, and chemicals, underscores its global economic influence. These factors collectively define Switzerland's status as a developed economy (Smart, 2022).

5.3.2.2 Japan

Japan is considered a developed economy due to its high GDP and GDP per capita, advanced infrastructure, and technological prowess. Renowned for its strong industrial base, particularly in automobiles, machinery, and electronics, Japan is a global leader in innovation. The country consistently ranks high on the Human Development Index (ranked 24th with a score of 0.920 in 2022 (UNDP, 2024)), reflecting excellent life expectancy, education, and healthcare. With a stable political and economic environment, sophisticated financial markets, and significant investment in research and development, Japan maintains low poverty and unemployment rates. These factors collectively underscore Japan's status as a developed economy (Masai et. al., 2024).

5.3.2.3 Germany

Germany is considered a developed economy due to its high GDP and GDP per capita, advanced industrial base, and strong export economy. Known for its highly skilled workforce and significant investment in research and development, Germany leads in manufacturing and technological innovation. The country consistently ranks high on the Human Development Index (ranked 7th with a score of 0.950 in 2022 (UNDP, 2024)), reflecting a high quality of life. With a robust financial sector, political stability, comprehensive infrastructure, and an extensive social welfare system, Germany's economic performance and social well-being underscore its status as a developed economy (Orth, 2023).

5.3.2.4 United States

The United States is considered a developed economy due to its largest global GDP and high GDP per capita, reflecting strong economic productivity and a high standard of living. With a diverse and advanced industrial base, the U.S. leads in sectors such as technology, finance, healthcare, manufacturing, and services (Vela & Khattar, 2023). It is a global leader in innovation and R&D, supported by a highly skilled workforce and renowned educational institutions. Political stability, a robust financial sector, comprehensive infrastructure, and a strong social welfare system further underscore its developed status. With a high Human Development Index (ranked 20th with a score of 0.927 in 2022 (UNDP, 2024)) and significant global economic influence, the United States maintains its position as a leading developed economy (Vela & Khattar, 2023).

5.3.2.5 Norway

Norway is considered a developed economy due to its high GDP per capita, extensive welfare system, and advanced infrastructure. The country enjoys economic stability, low unemployment, and effective management of natural resources, particularly oil and gas. Norway ranks high on the Human Development Index (ranked 2nd with a score of 0.966 in 2022 (UNDP, 2024)), reflecting its strong education and healthcare systems. Additionally, significant investments in innovation and education, coupled with political stability and good governance, further solidify Norway's status as a developed economy (Grytten, 2021).

5.3.2.6 Austria

Austria is recognized as a developed nation due to its high standard of living, advanced market economy, and robust integration with the European Union. It is "one of the wealthiest and most stable European Union Member States," with a skilled labour force and a high GDP per capita, which ranks 9th among OECD countries (Rostan & Rostan, 2020). The country's economy is driven by a predominant service sector, a well-developed industrial base, and a small but highly advanced agricultural sector (Rostan & Rostan, 2020).

Austria has demonstrated economic resilience, recovering rapidly from past financial crises and maintaining a stable fiscal deficit, which decreased to 2.6% of GDP by 2023 (OECD, 2024). It has also invested in productivity and innovation, with measures such as expanding high-speed broadband and reducing barriers to private sector investment to sustain growth. These efforts align with the nation's aim to enhance social mobility, environmental sustainability, and economic dynamism (OECD, 2024).

5.3.2.7 South Korea

South Korea is recognized as a developed nation due to its remarkable transformation from an agriculture-based economy in the 1960s to the 11th largest globally by GDP. Its success stems from "policy reforms aimed at opening the country to foreign markets" and export-driven growth, with exports accounting for over 50% of GDP (Santacreu & Zhu, 2018). South Korea leads in innovation, investing the highest share of GDP in R&D among OECD countries (Santacreu & Zhu, 2018).

The country’s focus on high-tech industries, such as consumer electronics and automotive manufacturing, has driven its economic growth. Known as one of the most innovative economies, "South Korea has transformed itself from one of the poorest to one of the richest nations in the world through innovation" (Domínguez & Mazumdaru, 2016).

5.3.2.8 Sweden

Sweden is recognized as a developed nation for its robust economy, global competitiveness, and innovation. It tops Forbes' "Best Countries for Business" due to low bureaucracy, advanced technology, and iconic global brands like Volvo and IKEA. Over two decades, "the country has undergone a transformation built on deregulation and budget self-restraint," establishing its global economic leadership (Gray, 2017).

Additionally, Sweden ranks first on the European Innovation Scoreboard, driven by investments in human resources, a skilled workforce, and top-tier academic research, cementing its status as an “Innovation Leader” in the EU (Gray, 2017). Furthermore, Sweden's resilience is evident in its robust food security system, supported by global trade interdependencies and climate adaptation strategies, ensuring sustainable agricultural practices despite environmental challenges (Horn et al., 2022).

5.3.2.9 United Kingdom

The United Kingdom is a developed nation, evidenced by its economic evolution and environmental sustainability. Over 250 years, the UK transitioned from an agrarian to a service-oriented economy, significantly reducing carbon emissions while maintaining growth, as demonstrated by the Environmental Kuznets Curve hypothesis (Ben Amar, 2021).

The UK has also shifted toward rentierism, with income increasingly generated from controlling scarce assets like finance and real estate. London's role as a global financial hub highlights the importance of financial rents, solidifying the UK's status as a developed economy (Christophers, 2023).

5.3.2.10 Netherlands

The Netherlands is a developed nation due to its strong economy, driven by innovation, sustainability, and historical progress. It ranks as Europe's most competitive economy and fourth globally, supported by "state-of-the-art infrastructure, a highly educated multilingual workforce, and a business climate that rewards innovation" (Vieau, 2024).

Historically, the Brethren of the Common Life (BCL) played a key role in fostering high literacy and human capital accumulation through accessible education and book production. This contributed to urbanization, economic growth, and the Netherlands' eventual global leadership (Akcomak et al., 2017).

6 METHODOLOGY AND EMPIRICAL APPROACH

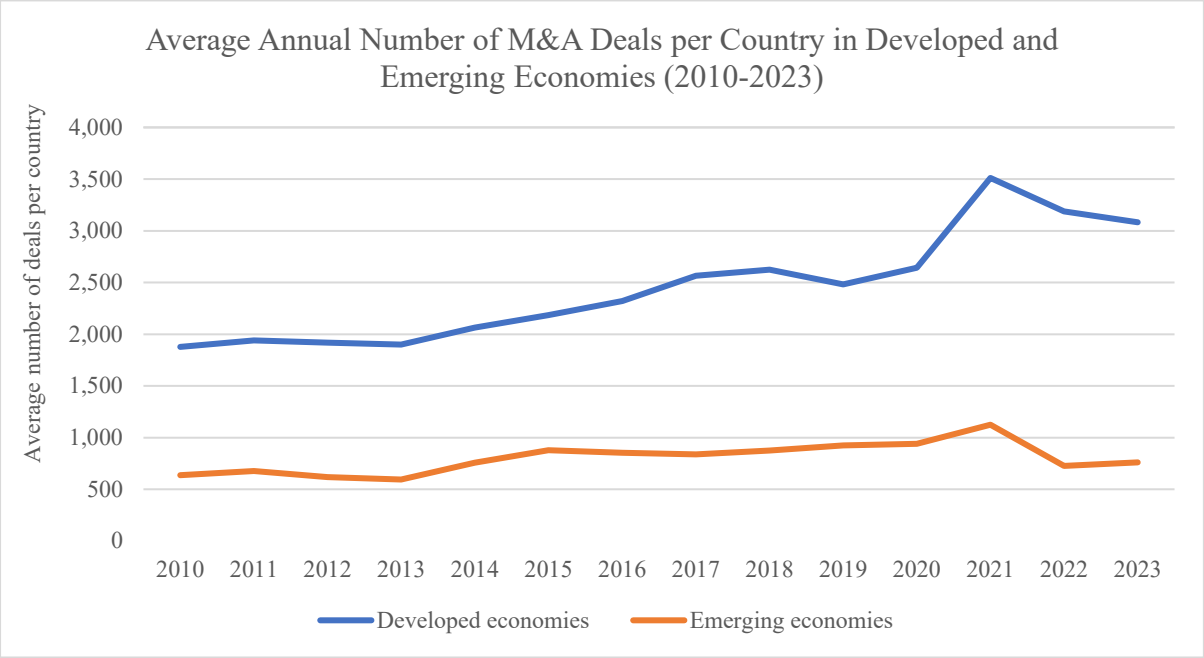
The empirical analysis will start with descriptive statistics and a correlation matrix in Excel, providing an initial understanding of the data distribution and the relationships between variables. Following this, the analysis will continue in R-Studio, where regression models will be applied to test the hypotheses and assess the effects of the selected variables. Furthermore, all data was collected on a yearly basis to maintain consistency across variables, minimize short-term noise, and highlight long-term trends without the complexities of seasonality or varying frequencies.

6.1 Descriptive statistics

While the empirical model in this thesis includes a wider set of explanatory variables, this section highlights three key indicators to provide an overview of cross-country patterns and trends: the number of M&A deals, the total value of those deals, and stock market volatility. These variables offer initial insight into the structural differences between developed and emerging economies in terms of market activity and financial dynamics.

Figure 1 presents the average annual number of M&A deals per country for developed and emerging economies over the period 2010–2023. For each year, the average was obtained by calculating the mean number of deals across all countries within each economic group.

Figure 1: Average annual number of M&A deals per country in developed and emerging economies (2010-2023)



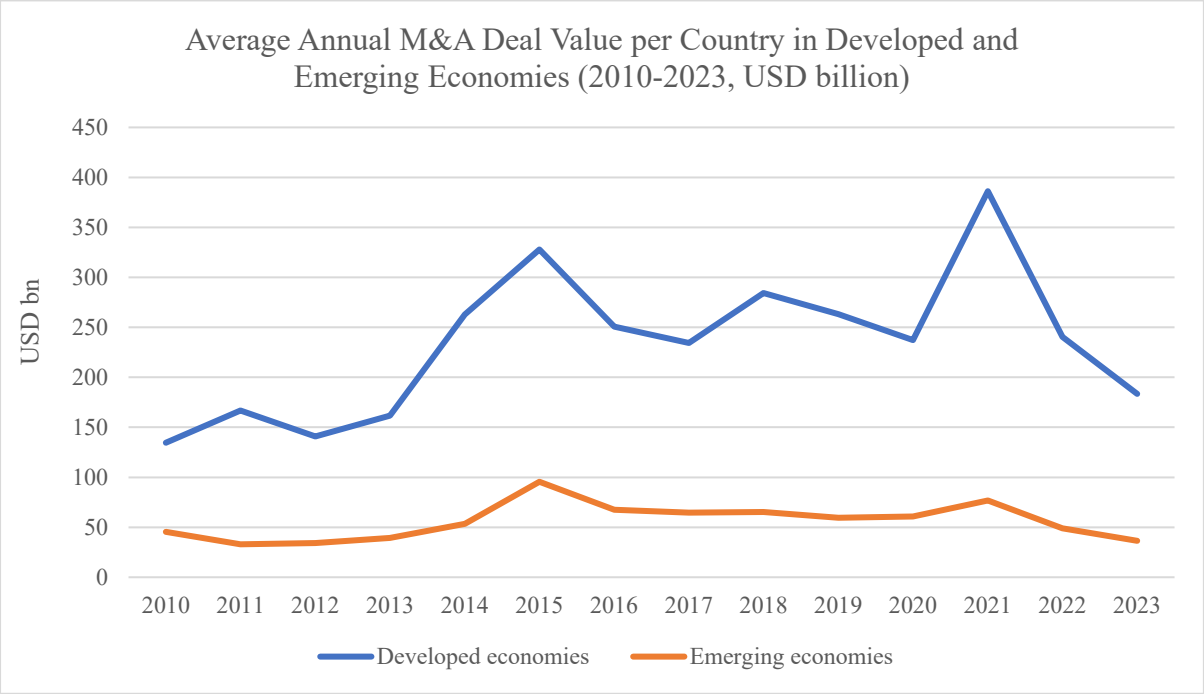
Source: own work based on Refinitiv (2024).

The data shows a consistent gap between the two groups, with developed economies conducting significantly more M&A transactions each year. From 2010 to 2015, the number of deals in developed economies grew moderately, followed by a more pronounced increase until 2021, when deal volume peaked—likely reflecting a post-pandemic investment rebound. A slight decline is observed in 2022 and 2023, yet the overall trend remains upward over the full period.

In contrast, emerging economies exhibit lower M&A deal volumes across the entire period, with relatively mild growth. The increase is most visible from 2014 to 2021, but the number of deals remains less than half of that seen in developed markets. A sharp drop occurs after 2021, possibly reflecting greater sensitivity to global financial conditions. This persistent disparity highlights structural differences in market maturity, institutional frameworks, and access to capital.

Figure 2 complements this by showing the average annual M&A deal value per country in developed and emerging economies over the same period.

Figure 2: Average annual M&A deal value per country in developed and emerging economies (2010-2023, USD billion)



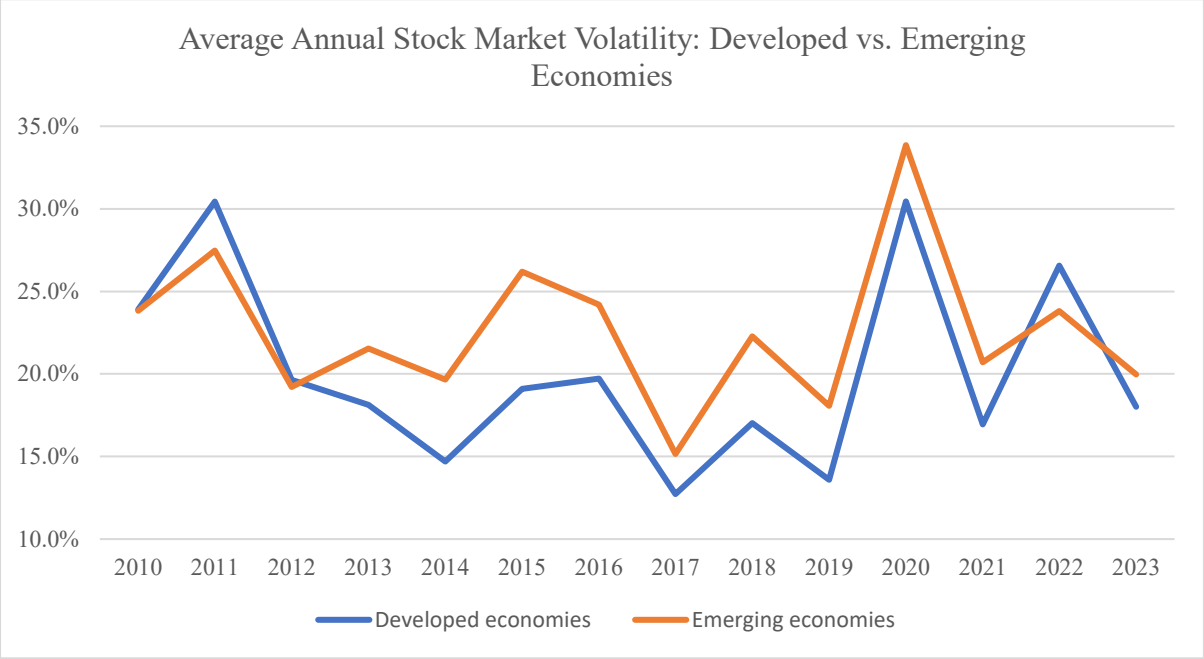
Source: own work based on Refinitiv (2024).

The data reveals a significant and persistent gap in M&A deal values, with developed economies consistently attracting substantially higher investment amounts. Notable surges occurred between 2014 and 2015, and again in 2021, which may reflect the effects of post-crisis recovery and delayed deal execution during the COVID-19 pandemic. While developed markets generally trended upward until 2021, the trajectory included several periods of decline — particularly from 2015 to 2017 and again from 2018 to 2020 — before a marked drop in the final two years.

Emerging economies, on the other hand, recorded far lower deal values throughout the period, with only modest growth and limited volatility. Their peak in 2015 was relatively minor, and values remained stable afterward with a slight dip toward the end of the sample. This divergence in deal value reflects differences in market depth, investor confidence, and institutional capacity between the two groups.

Figure 3 shifts focus to stock market dynamics, displaying average annual volatility for developed and emerging economies.

Figure 3: Average annual stock market volatility: developed vs. emerging economies



Note: Volatility is calculated from daily closing prices using daily returns. The standard deviation of these returns is computed and then annualized by multiplying daily volatility by the square root of the number of trading days.

Source: own work based on Refinitiv (2024).

The data shows that emerging markets more often than not experienced higher volatility levels compared to developed economies across the period. Both groups followed similar cyclical trends—most notably a sharp peak in 2020, driven by pandemic-induced financial uncertainty—but the magnitude of volatility was generally greater in emerging economies. Developed markets showed a more stable trajectory with lower year-to-year variation, reflecting stronger financial infrastructure and more predictable policy environments.

While the gap in volatility narrowed in certain years (e.g., 2012, 2021, and 2023), the overall trend reinforces the notion that emerging markets carry higher financial risk, which can influence investor behaviour and M&A decision-making.

Taken together, these three figures reveal consistent structural differences between developed and emerging economies in terms of M&A activity and financial conditions. Developed economies not only host a higher number of M&A deals but also generate significantly greater deal value—indicating both broader market participation and larger-scale transactions. At the same time, they exhibit lower and more stable stock market volatility, which likely contributes to a more predictable investment environment that supports sustained deal-making. In contrast, emerging economies face higher volatility and attract fewer and smaller deals, suggesting that greater financial uncertainty and institutional constraints may inhibit M&A activity. These patterns support the premise that stock market conditions, institutional quality, and market

development jointly influence cross-border investment behaviour and will be further examined in the empirical analysis.

6.2 Correlation matrix

Before proceeding to regression analysis, it is important to examine the relationships between the main variables included in the model. The correlation matrix provides a first indication of how the selected independent variables are associated with the M&A outcome variables—M&A Value and Number of Deals. This section presents the correlation results for the full sample of countries, followed by separate analyses for emerging and developed economies.

6.2.1 All countries

Table 2 presents the correlation matrix for all countries in the dataset, including both developed and emerging economies. The matrix illustrates the strength and direction of linear relationships between the dependent variables (Value and Number of Deals) and the explanatory variables included in the empirical model.

Table 3: Correlation matrix of all countries

	M&A Value	*#Deals*	*Real GDP growth*	*GDP per capita*	*Inflation rate*	*Volatility*	*EFI*	*FDI*
M&A Value	1							
#Deals	0.93***	1						
Real GDP growth	0.04	0.06	1					
GDP per capita	0.24***	0.24***	-0.24***	1				
Inflation rate	-0.10	-0.13	0.17**	-0.26***	1			
Volatility	-0.17**	-0.18**	-0.17**	-0.14	0.29***	1		
EFI	0.26***	0.25***	-0.30***	0.84***	-0.42***	-0.30***	1	
FDI	-0.19**	-0.08	-0.17**	0.26***	-0.08	-0.02	0.36***	1

Note: Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work based on Refinitiv (2024 f-z), IMF (2024 a-c), World Bank (2024 d) and the Fraser institute (2024 e).

A very strong and statistically significant positive correlation is observed between M&AValue and Number of Deals (0.93***), indicating that countries with more M&A transactions also tend to record higher total deal values. This confirms that both variables jointly reflect M&A intensity and are often used together in empirical research.

GDP per Capita shows a moderate and statistically significant positive correlation with both M&A Value (0.24***) and Number of Deals (0.24***). This suggests that more economically developed countries are likely to engage in more frequent and higher-value M&A transactions.

Similarly, the Economic Freedom Index also shows moderate, statistically significant correlations with M&A Value (0.26***) and Number of Deals (0.25***), highlighting that better institutional quality is associated with a more active M&A environment. In addition, EFI and GDP per Capita are themselves strongly and significantly correlated (0.84***), indicating that wealthier countries also tend to have more liberalized and open economic systems, which can facilitate both domestic and cross-border mergers.

The Inflation Rate has weak and statistically insignificant negative correlations with M&A Value (−0.10) and Number of Deals (−0.13), suggesting a limited direct influence on M&A outcomes. However, inflation is moderately and significantly positively correlated with Volatility (0.29***), which may reflect the link between rising price levels and market instability.

Volatility itself shows a weak but statistically significant negative correlation with both Value (−0.17**) and Number of Deals (−0.18**), supporting the notion that increased uncertainty in financial markets may discourage firms from pursuing mergers and acquisitions.

Finally, FDIs is weakly and significantly negatively correlated with M&A Value (−0.19**), while its correlation with Number of Deals is very weak and statistically insignificant (−0.08). This suggests that general FDI flows are not strongly aligned with the frequency of M&A transactions and may reflect broader patterns of cross-border capital movement.

6.2.2 Emerging economies

Table 3 shows the correlation matrix for emerging economies, providing an overview of how the selected explanatory variables relate to M&A activity.

Table 4: Correlation matrix of emerging economies

	M&A Value	*#Deals*	*Real GDP growth*	*GDP per capita*	*Inflation rate*	*Volatility*	*EFI*	*FDI*
M&A Value	1							
#Deals	0.96***	1						
Real GDP growth	0.27***	0.29***	1					
GDP per capita	0.16***	0.14***	0.09***	1				
Inflation rate	-0.16***	-0.16***	0.08***	0.26***	1			
Volatility	0.01	-0.04***	-0.25***	0.21***	0.29***	1		
EFI	-0.56***	-0.61***	-0.21***	-0.05***	-0.33***	-0.34***	1	
FDI	-0.39***	-0.46***	-0.24***	-0.04***	0.06***	-0.10***	0.44***	1

Note: Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work based on Refinitiv (2024 f-z), IMF (2024 a-c), World Bank (2024 d) and the Fraser institute (2024 e).

The correlation analysis for emerging markets reveals several important relationships. First, there is again a very strong and statistically significant correlation between M&A Value and Number of Deals (0.96***), indicating that countries engaging in more M&A transactions tend to generate higher total deal values. This underscores the close connection between the frequency and overall scale of M&A activity.

Among macroeconomic indicators, Real GDP Growth shows weak but statistically significant positive correlations with both M&A Value (0.27***) and Number of Deals (0.29***), suggesting that higher economic growth is modestly associated with increased M&A activity. Similarly, GDP per Capita is also positively correlated with M&A outcomes, albeit to a lesser extent —0.16*** for M&A Value and 0.14*** for Number of Deals—implying that wealthier emerging economies tend to experience slightly more deal activity.

The Inflation Rate displays weak negative correlations with both M&A Value and Number of Deals (−0.16***), indicating that rising inflation may act as a mild deterrent to M&A, possibly by increasing economic uncertainty or raising financing costs.

Volatility shows a very weak but statistically significant negative correlation with the Number of Deals (−0.04***), suggesting that heightened market fluctuations might slightly discourage deal frequency. However, its correlation with M&A Value is negligible and statistically insignificant (0.01), indicating no clear relationship between volatility and the total value of deals in emerging economies. In contrast, the Economic Freedom Index is moderately and negatively correlated with both M&A Value (−0.56***) and Number of Deals (−0.61***), suggesting that even countries with lower levels of economic liberalization can attract notable M&A activity. This may reflect strategic factors such as resource availability, privatization opportunities, or early-stage market potential.

Lastly, FDIs exhibits moderate and significant negative correlations with M&A Value (−0.39***) and Number of Deals (−0.46***), potentially indicating a substitution effect—where countries receiving more FDI may rely less on M&A as a foreign investment channel.

6.2.3 Developed economies

Table 4 presents the correlation matrix for developed economies, showing how key explanatory variables relate to M&A activity.

Table 5: Correlation matrix of developed economies

	M&A Value	*#Deals*	*Real GDP growth*	*GDP per capita*	*Inflation rate*	*Volatility*	*EFI*	*FDI*
M&A Value	1							
#Deals	0.94***	1						
Real GDP growth	0.11	0.09	1					
GDP per capita	0.06	-0.03	0.01	1				
Inflation rate	0.07	0.13	0.17**	0.01	1			
Volatility	-0.23***	-0.21***	-0.18**	-0.04	0.22***	1		
EFI	0.38***	0.33***	0.07	0.38***	-0.35***	-0.42***	1	
FDI	-0.30***	-0.14*	0.02	-0.12	0.06	0.14	-0.11	1

Note: Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work based on Refinitiv (2024 f-z), IMF (2024 a-c), World Bank (2024 d) and the Fraser institute (2024 e).

Several important patterns have been noticed from the correlation matrix for developed. First, M&A Value and Number of Deals as before have shown a very strong and statistically significant positive correlation (0.94***), indicating that in developed economies, more frequent M&A activity is closely linked to higher overall deal values. This aligns with findings from the full and emerging country samples, confirming the strong relationship between deal frequency and volume.

Volatility displays a moderate negative and statistically significant correlation with both M&A Value (−0.23***) and Number of Deals (−0.21***), suggesting that heightened volatility may discourage M&A activity even in mature markets, likely by increasing perceived risks or reducing valuation confidence. The Economic Freedom Index is moderately and positively correlated with M&A Value (0.38***) and Number of Deals (0.33***). These results support the notion that stronger institutional quality and higher levels of regulatory openness are associated with more active merger and acquisition markets in developed economies.

FDIs are negatively correlated with both M&A outcomes, at −0.30*** for M&A Value and −0.14* for Number of Deals. These correlations suggest that countries with higher levels of FDI inflows might engage in less domestic or inbound M&A activity, possibly due to a preference for greenfield investments or other forms of capital inflow.

Real GDP Growth and GDP per Capita show very weak and mostly insignificant correlations with M&A outcomes. For example, GDP per Capita correlates only 0.06 with M&A Value and −0.03 with Number of Deals, while Real GDP Growth shows weak positive but insignificant values (0.11 and 0.09; respectively). This implies that broad economic development and growth, while important, do not show a strong direct correlation with M&A activity in this country group.

Interestingly, the Inflation Rate shows a very weak and statistically insignificant correlation with M&A Value (0.07) and Number of Deals (0.13), while being to a lesser extent positively correlated with Real GDP Growth (0.17**) and Volatility (0.22***), potentially suggesting that inflation has only an indirect minimal effect on M&A activity in developed countries.

While the overall relationships between the key variables and M&A activity are generally similar across developed and emerging economies, a few important differences emerge upon closer comparison. To start, both groups show a very strong and significant correlation between M&A Value and Number of Deals, confirming that a higher number of transactions is typically associated with greater total deal value. However, differences become more apparent when looking at the role of the Economic Freedom Index. In developed countries, higher EFI scores are positively and significantly associated with both deal value and volume, suggesting that strong institutions and open markets tend to support more active M&A environments. On the other hand, in emerging economies, EFI shows a negative and significant relationship with M&A activity. This could imply that deals in these markets are often driven by other motivations—such as access to natural resources or market entry opportunities—rather than institutional quality.

FDIs also behaves differently between the two groups, although in both cases it is negatively correlated with M&A indicators. In developed economies, the negative link is moderate, whereas in emerging markets, it is stronger. This pattern may reflect a kind of substitution effect, where countries attracting higher levels of FDI may see less reliance on M&A as the primary form of foreign investment.

Volatility further highlights the contrast. In developed markets, higher volatility is moderately and significantly associated with lower M&A activity, reinforcing the idea that uncertainty tends to discourage deals. In emerging economies, however, this relationship is much weaker: the correlation with the number of deals is only slightly significant, and there is no significant connection with deal value. This suggests that in less stable markets, investors may be more accustomed to operating in uncertain environments, or that other factors may offset the impact of volatility.

Lastly, inflation shows a meaningful difference across groups, where in developed economies, it appears to have no significant or consistent impact on M&A activity. In contrast, emerging markets display a weak but significant negative correlation between inflation and both M&A indicators, indicating that inflation-related uncertainty may act as a barrier to deal-making in these countries.

6.3 Regression analysis

Following the descriptive statistics and correlation matrix analysis, I now proceed to the regression analysis. While the earlier sections showed general patterns and relationships, the regression model variants help identify which factors have a real and measurable impact on

M&A activity when all variables are considered together. This approach offers a more complete and reliable understanding of what drives deal-making across economies.

All regression specifications were estimated in R using multivariate ordinary least squares (multivariate OLS[1]). In this approach, M&A Value and Number of Deals were estimated together with the same set of predictors. This method produces the same results as running two separate OLS regressions but reports them in a joint framework. It is therefore not a seemingly unrelated regression (SUR), since SUR applies generalized least squares to explicitly use the correlation between error terms across equations, while multivariate OLS does not. Nevertheless, the multivariate OLS framework still offers advantages: it allows for a more efficient estimation of the variance–covariance matrix when the error terms of the dependent variables are correlated, provides more reliable standard errors, and makes it possible to conduct joint hypothesis tests across equations. In addition, it makes the results easier to interpret, allows direct comparison of coefficients across models, and reflects the fact that M&A Value and Number of Deals are closely related but still capture different aspects of M&A activity.

To confirm that the results of the model variants are not driven by multicollinearity, Variance Inflation Factor (VIF) tests were conducted separately for each dependent variable. As expected, the variables Volatility and Volatility² display elevated VIF values due to their mechanical correlation; however, this does not constitute problematic multicollinearity in the context of polynomial specifications. For the remaining explanatory variables, the results show no indication of concerning multicollinearity, lending confidence to the stability of the coefficient estimates. It should nevertheless be noted that potential endogeneity remains a limitation. In particular, volatility may not only influence M&A activity but also be affected by it, since major deals can trigger price movements and valuation changes. Similarly, macroeconomic indicators such as GDP growth may both shape and be shaped by M&A activity. This simultaneity cannot be fully addressed within the present framework, and the results should therefore be interpreted as associations rather than strictly causal effects. Full VIF results are presented in Appendix 1.

To assess the robustness of the findings—especially the effects of volatility—four different model variants were constructed by incrementally adding variables:

- Model variant 1 (baseline model) includes the baseline macroeconomic variables: Volatility, Volatility², Real GDP growth, GDP per capita, Inflation rate, and a Development Dummy indicating emerging (1) or developed (0) countries.
- Model variant 2 (full model) includes all the variables, offering the most comprehensive specification.
- Model variant 3 (interaction model) builds on the full model by multiplying all explanatory variables with the emerging-country dummy (1 for emerging, 0 for developed). This

[1] R code: lm(cbind(`M&A Value`, `#Deals`) ~ predictors, data = dataset)

specification allows testing whether the impact of macroeconomic variables differs systematically between emerging and developed economies, thereby capturing heterogeneous effects across the two groups.

- Model variant 4 (fixed effects model) includes both country and year fixed effects, offering control for unobserved, stable country characteristics (for example: institutional quality, market history) as well as global shocks or common time trends, thus seeing if the results are driven by structural differences between countries or particular years.

One key decision, which I have already mentioned in the Model introduction part of the thesis, is the exclusion of Market Capitalization from the regression analysis. Although it is theoretically important as a measure of financial market depth, it is also considered highly endogenous— meaning it is likely influenced by the same macroeconomic and institutional factors that drive M&A activity and could itself be affected by M&A outcomes (reverse causality). Including it would violate the regression assumption that explanatory variables must be uncorrelated with the error term, potentially leading to biased and inconsistent estimates. Therefore, it was excluded from the empirical part, but its role and limitations are still discussed in the theoretical framework of this thesis to ensure transparency.

The inclusion of a squared volatility term in all model variants reflects the hypothesis that moderate volatility may stimulate M&A activity by creating acquisition opportunities, while high volatility may deter deals due to increased uncertainty and valuation risk. This non-linear relationship has been proposed in the literature, particularly by Kuzmina (2021), and is tested directly in the regression model variants that follow.

To put the results into perspective, the baseline specification is compared with the full specification. Table 5 presents Model Variant 1 (baseline model)—which includes only the core macroeconomic explanatory variables and a squared volatility term—and Model Variant 2 (full model)—which adds the remaining controls and year fixed effects. Keeping the baseline together with the full model is important because it shows that the main results—especially the U-shaped effect of volatility—are not just a product of adding more variables. Comparing the two models also makes it clear how much the extra controls contribute and how sensitive the results are to factors such as macroeconomic conditions, institutions, and time effects. Showing both models side by side therefore makes the analysis more transparent and gives greater confidence that the findings are robust. Additional robustness checks can be found in Appendix 2.

In variant 1 (baseline model), volatility has a negative and highly significant effect on both M&A Value and Number of Deals, while the squared term is positive and significant, confirming a U-shaped relationship. A 1pp increase in volatility is associated with a reduction of roughly 38 billion USD in M&A Value and about 249 fewer deals. At the same time, the positive squared term indicates that the negative impact weakens as volatility rises and can even reverse at very high levels—for example, at a volatility level of 10%, a 1pp increase corresponds to an additional 1.3 trillion USD in deal value and over 8,700 additional deals.

Among the other variables, real GDP growth is positively associated with the number of deals, though not with deal value, while GDP per capita and inflation are statistically insignificant. The development dummy is negative and significant, suggesting lower M&A activity in emerging markets.

Adding further explanatory variables in variant 2 and year fixed effects in the full specification largely confirms these findings. The non-linear effect of volatility remains statistically significant, supporting the view that moderate volatility can stimulate deal-making, while high volatility discourages it. In the full model, for instance, a 1pp increase in volatility reduces deal value by about 30 billion USD and lowers the number of deals by around 250, but the positive squared term quickly offsets this effect as volatility rises. At a volatility level of 10%, the same increase is associated with an additional 944 billion USD in deal value and over 7,350 additional deals. Beyond volatility, real GDP growth continues to positively influence M&A activity, especially deal count, while FDI shows a strong negative association with both outcomes, suggesting a substitution effect between M&A and other forms of foreign investment. EFI shows a positive but statistically insignificant coefficient for M&A Value. Year fixed effects capture global shocks and time-specific influences, with the 2020 dummy notably significant for deal count, possibly reflecting a rebound in activity following early pandemic disruptions.

Table 6: Model variant 1 (baseline model) and model variant 2 (full model)

	Model variant 1		Model variant 2	
	Dependent variables			
	M&A Value (in bn $)	Number of deals (in k)	M&A Value (in bn $)	Number of deals (in k)
Volatility	-37.79***	-0.25***	-30.33**	-0.25**
	(12.36)	(0.94)	(14.25)	(0.11)
Volatility^2	64.71***	0.43**	46.40*	0.35*
	(24.34)	(0.18)	(26.47)	(0.20)
Real GDP growth	12.53	0.12**	19.62*	0.20**
	(8.00)	(0.06)	(10.63)	(0.08)
GDP per capita	0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation rate	5.22	-0.00	3.38	-0.01
	(3.98)	(0.03)	(4.34)	(0.03)
Emerging-country dummy	-1.23	-2.09***	-1.35	-3.15***
	(0.89)	(0.67)	(1.08)	(0.83)

To be continued

Table 5: Model variant 1 (baseline model) and model variant 2 (full model) (cont.)

	Model variant 1		Model variant 2	
	Dependent variables			
	M&A Value (in bn $)	Number of deals (in k)	M&A Value (in bn $)	Number of deals (in k)
FDI	n/a	n/a	-0.00***	-0.00***
	n/a	n/a	(0.00)	(0.00)
EFI	n/a	n/a	128.41	-0.47
	n/a	n/a	(79.12)	(0.61)
Year FE	No	No	Yes	Yes
Observations	280	280	280	280
R-squared	0.107	0.127	0.208	0.196

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.

Building on the full model, the next step introduces interaction terms between the key explanatory variables and the emerging-country dummy. This variant allows the effects of volatility, inflation, GDP per capita, and institutional quality to differ systematically between developed and emerging economies. By doing so, the model captures potential structural asymmetries across market types, offering deeper insights into how macroeconomic and institutional drivers shape M&A activity in distinct economic environments.

Table 6 presents the results of the interaction model, which allows the effects of key explanatory variables to differ between developed and emerging economies. The non-linear impact of volatility remains evident: in developed markets, a 1pp increase in volatility is associated with a decrease of about 52 billion USD in M&A value and a decrease of roughly 418 deals, while the squared term offsets this decline, where at a volatility level of 10%, a 1pp increase raises M&A deal value by about 2.2 trillion USD and the number of deals by around 17,000. In emerging markets, by contrast, the coefficients on both the linear and quadratic volatility terms are much weaker, and only the quadratic effect for deal value reaches marginal significance at the 10% level, where a 1pp increase in the squared term implies an approximate 244 billion USD increase in dela value. This suggests that volatility plays a far less decisive role in shaping M&A activity outside developed economies. Inflation increases M&A activity in developed countries, but in emerging countries the effect turns slightly negative, with deal value decreasing by about 6.6 billion USD and the number of deals falling by roughly one when inflation rises by 1pp. Higher GDP per capita reduces M&A in developed economies, while in emerging markets it shows the opposite pattern, supporting the idea of catch-up growth. EFI encourages M&A in developed countries, but in emerging economies it is linked to lower activity, suggesting that institutions work differently across the two groups.

Table 7: Model variant 3 (interaction model)

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Volatility	-51.61**	-0.42**
	(22.58)	(0.17)
Volatility^2	102.60**	0.82**
	(47.75)	(0.36)
Real GDP growth	8.55	-0.00
	(12.27)	(0.09)
GDP per capita	-0.00***	-0.00***
	(0.00)	(0.00)
Inflation rate	63.88***	0.56***
	(13.81)	(0.10)
Emerging-country dummy	7,687.00***	65.34***
	(1,274.00)	(9.54)
FDI	-0.00***	-0.00
	(0.00)	(0.00)
EFI	864.23***	6.27***
	(126.71)	(0.95)
Volatility x Emerging dummy	43.03	0.28
	(26.48)	(0.20)
Volatility^2 x Emerging dummy	-90.98*	-0.66
	(53.98)	(0.40)
Real GDP growth x Emerging dummy	-5.57	0.03
	(15.23)	(0.11)
GDP per capita x Emerging- dummy	0.02*	0.00***
	(0.01)	(0.00)
Inflation rate x Emerging dummy	-70.51***	-0.64***
	(14.35)	(0.11)
FDI x Emerging dummy	0.00	-0.00
	(0.00)	(0.00)
EFI x Emerging dummy	-1,108.00***	-9.57***
	(156.82)	(1.17)

To be continued

Table 6: Model variant 3 (interaction model) (cont.)

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Observations	280	280
R-squared	0.319	0.348

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.

Building on the interaction model in Table 7, the next step is to account more directly for time-invariant unobserved heterogeneity across countries and cross-country time effects. This is done by introducing country and year fixed effects, which absorb structural differences between economies as well as global shocks that affect all countries in a given year.

Table 7 presents the results of the fixed effects specification, which controls for both country-specific and year-specific influences. Once these fixed effects are introduced, volatility no longer shows a significant impact on M&A activity. Both the linear and squared terms are insignificant, meaning that the U-shaped relationship observed in earlier models disappears when unobserved heterogeneity is accounted for. This change highlights that much of the explanatory power is now captured by the fixed effects. The very high R-squared values (0.91 for M&A Value and 0.95 for Number of Deals) suggest that differences between countries and years explain most of the variation in M&A activity, rather than the included macroeconomic variables. Among the remaining predictors, GDP per capita remains highly significant and positive, confirming its strong association with both deal value and deal count. Real GDP growth is weakly significant, while FDI continues to show a negative effect on M&A Value. Other variables, including volatility and EFI, no longer provide meaningful explanatory power once country and year effects are included.

Table 8: Model variant 4 (fixed effects model)

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Volatility	5.50	0.03
	(5.01)	(0.03)
$Volatility^2$	5.49	-0.04
	(8.97)	(0.05)
Real GDP growth	8.36*	0.05*
	(4.33)	(0.02)

To be continued

Table 7: Model variant 4 (fixed effects model) (cont.)

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
GDP per capita	0.01***	0.00***
	(0.00)	(0.00)
Inflation rate	0.32	-0.01
	(2.02)	(0.01)
FDI	-0.00***	-0.00
	(0.00)	(0.00)
EFI	7.03	-0.22
	(52.51)	(0.29)
Year FE	Yes	Yes
Country FE	Yes	Yes
Observations	280	280
R-squared	0.910	0.953

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.

The regression analysis shows that volatility matters in simpler models, where it has a clear U-shaped effect: moderate volatility reduces M&A activity, while very high volatility can stimulate it. This partially confirms the main hypothesis of the thesis. However, once country and year fixed effects are added, volatility loses its significance, suggesting that much of its role is absorbed by structural country characteristics and global shocks. Other results remain more consistent, where real GDP growth supports higher deal activity, GDP per capita is strongly linked to both deal value and deal count, and FDI is negatively associated with M&A value, pointing to substitution between investment types. Overall, the models highlight the complex and multi-layered nature of M&A activity, where no single factor fully explains the dynamics across countries and over time.

7 INTERPRETATION

This chapter interprets the results of the regression analysis. The focus is on how stock market volatility, alongside other macroeconomic and institutional variables, shapes M&A activity in terms of deal value and number of transactions. Volatility receives particular attention, as it is the central variable of this thesis and showed a consistent non-linear role in earlier models, though its significance changes once country and year fixed effects are introduced. The analysis also considers the influence of GDP per capita, real GDP growth, inflation, FDI, and

institutional quality, while highlighting systematic differences between developed and emerging economies. This sets the groundwork for the broader discussion that follows.

7.1 The role of stock market volatility

Stock market volatility is the central variable in this thesis, and the results show that it affects M&A activity in a non-linear way. In the baseline and full models, volatility enters with a negative coefficient while the squared term is positive, which means the relationship is U-shaped. At first looking at model variants without country fixed effects, more volatility reduces M&A activity, but at very high levels, it can actually increase it.

In the full model (Table 5), a 1pp increase in volatility is associated with a decrease of about 30 billion USD in deal value and roughly 250 fewer deals (whereas in the baseline model, a 1pp increase is associated with a 38 billion USD rise in deal value and around 249 additional deals). However, as volatility rises, the positive squared term increasingly offsets this negative effect. For instance, at a volatility level of 10%, a 1pp increase corresponds to an additional 944 billion USD in deal value and more than 7,300 additional deals, in the squared term (compared to about +1.3 trillion USD and +8,700 deals in the baseline model). This pattern suggests that moderate volatility discourages transactions, while higher volatility may encourage firms to acquire undervalued companies or consolidate under pressure.

Looking separately at developed and emerging markets (Table 6), a clearer picture emerges. In developed economies, the U-shaped pattern is very strong: a 1pp increase in volatility is associated with a decrease of about 52 billion USD in deal value and around 418 fewer deals, but the squared term offsets this decline at higher levels. At a volatility level of 10%, a 1pp increase raises deal value by about 2.2 trillion USD and the number of deals by roughly 17,000. In emerging economies, by contrast, the coefficients on both the linear and quadratic volatility terms are much weaker. Only the squared term for deal value reaches marginal significance at the 10% level, implying that at very high volatility, a 1pp increase may add around 244 billion USD in deal value. This suggests that the strong U-shaped effect seen in the pooled sample is primarily driven by developed economies.

However, it is important to note that once country and year fixed effects are added (Table 7), the role of volatility changes. Both the linear and squared terms become insignificant, meaning that the U-shaped pattern disappears when structural country differences and global shocks are controlled for. This suggests that volatility's effect is less direct than it first appears, and that much of its influence is captured by broader country characteristics (such as institutions or financial depth) and by time-specific global factors (like crises or policy changes).

To test whether M&A activity is explained mainly by time-invariant country characteristics rather than by volatility itself, I conducted a separate regression where the change in volatility was used instead of volatility levels (Appendix 3). The results did not differ from the model variant 4: once country fixed effects are included, neither volatility nor its changes significantly

explain M&A outcomes. This supports the interpretation that deal value and deal count are largely driven by persistent country traits and global shocks, rather than by short-term fluctuations in volatility.

Taken together, these findings suggest that the main hypothesis of the thesis is only partly supported in models without country fixed effects: lower volatility is generally linked with less M&A activity, but at extreme levels the opposite can occur, especially in developed markets. Once fixed effects are introduced, however, volatility no longer shows a significant impact. This indicates that the explanatory power of volatility is largely absorbed by time-invariant country characteristics. In other words, what initially looks like a volatility effect is, to a large extent, a reflection of deeper structural differences between countries and shared global dynamics, rather than volatility itself.

7.2 Fixed effects: country and year

The model variants also included fixed effects variables to capture country and year effects. These controls help to account for differences that are not directly measured by the explanatory variables but may still influence M&A activity.

In the full model (Table 5), where only year fixed effects are added, most of the year dummies are not statistically significant. The main exception is the year 2020, which shows a positive effect on the number of deals, likely reflecting a rebound in M&A activity after the initial COVID-19 disruptions. Apart from this, year effects on their own do not explain much variation in M&A outcomes.

The emerging-country dummy also provides useful insights. In the full model (Table 5) for the number of deals, the coefficient is around −3,150 ($p < 0.01$). Since the dummy is coded as 1 for emerging economies and 0 for developed ones, this means that emerging economies are associated with fewer M&A transactions than developed ones, once we control for macroeconomic factors, FDI, EFI, and year effects. For deal value, however, the dummy is generally insignificant, turning significant only once (in Table 6). This shows that the gap between developed and emerging economies is clearer in terms of deal volume than in deal size.

To explore these differences in more detail, Table 6 (interaction model) allows the effects of volatility, growth, inflation, and other variables to differ systematically between the two groups of countries. The results highlight that developed economies are the main drivers of the U-shaped volatility effect: in these markets, volatility has a strong negative linear impact on both deal value and deal counts, but the squared term offsets this decline at high levels, creating a robust U-shaped pattern. In emerging economies, by contrast, the linear effect of volatility is weaker and insignificant, while the squared effect is only marginally significant for deal value. This suggests that volatility plays a much more decisive role in shaping M&A in developed

economies, whereas in emerging markets, other structural and institutional factors are more important.

Finally, in the fixed-effects model (Table 7), which includes both country and year effects, the explanatory power rises dramatically, with R^2 values above 0.90 for both deal value and deal count. Once these fixed effects are included, volatility and most macroeconomic variables lose their significance. This shows that much of the variation in M&A activity is explained by structural country traits—such as institutional quality, history, and financial development—as well as global shocks that affect all countries each year.

Taken together, these results suggest a layered picture. Developed economies dominate global M&A in terms of deal numbers and are more sensitive to volatility dynamics, while emerging economies play a smaller but growing role, with activity shaped more by structural change and growth than by market fluctuations. The strong effect of country and year fixed effects underscores that deep, long-term characteristic—rather than short-term volatility—explain the largest share of M&A variation across the sample.

7.3 Other determinants of M&A

Besides volatility and the fixed effects for countries and years, the regression models also test how other macroeconomic and institutional variables influence M&A activity. These include real GDP growth, GDP per capita, inflation, FDI, and the EFI. The results show that some of these factors are more important than others, and their effects differ across model variants.

Real GDP growth generally supports higher M&A activity. In several specifications, stronger growth is linked to both more deals and higher deal values. For example, in the full model for the number of deals, a 1pp increase in GDP growth is associated with roughly 50 additional deals. The effect on deal value is weaker and less consistent but still points in a positive direction. This suggests that faster-growing economies create more opportunities and pressures for corporate restructuring, particularly in emerging markets where growth is less stable and companies may need to consolidate or expand quickly.

GDP per capita, by contrast, shows a stable and strongly positive relationship with both the number and value of deals once country fixed effects are introduced. In the fixed-effects model, a 1,000 USD increase in GDP per capita is linked to an increase of about 10 billion USD in deal value and around 60 additional deals. This implies that wealthier economies, which typically have more developed financial systems and larger firms, tend to attract more and larger M&A transactions. The result also underlines a difference between emerging and developed economies: while income growth supports the depth of M&A markets, the absolute level of income matters most when structural country traits are controlled for.

Inflation does not show a consistent effect. In some specifications, particularly in the interaction model, inflation increases M&A activity in developed countries but reduces it in

emerging ones. For instance, in emerging markets a 1pp increase in inflation is associated with a decrease of roughly 6.6 billion USD in deal value and about one fewer deal. This contrast suggests that while moderate inflation may coincide with expansion in stable economies, in emerging markets it signals instability and risk, which discourages acquisitions.

Foreign direct investment has a clear and robust negative relationship with M&A activity. Across multiple model variants, higher FDI inflows are linked to fewer deals and lower deal values. For example, in the full model for M&A value, the coefficient is about −1.6 ($p < 0.01$), meaning that an additional billion USD of FDI is associated with a reduction of roughly 1.6 billion USD in M&A value. This points to a substitution effect: when countries attract more FDI, investors may prefer to enter through greenfield investments or joint ventures rather than through acquisitions.

Finally, EFI shows weak and inconsistent effects. In some models, EFI is positive for M&A value, suggesting that greater institutional quality and openness could support larger deals, but the results are not robust. For example, in the interaction model the coefficient is about +135 billion USD ($p < 0.10$), but in other variants EFI is insignificant. This suggests that the EFI, as a broad index, may be too general to capture the institutional factors most relevant for M&A, such as corporate governance standards or sector-specific regulations.

Overall, the additional determinants confirm that economic growth and FDI are the most important drivers of M&A activity alongside volatility. Growth supports more transactions, particularly in emerging markets, while FDI often substitutes for acquisitions. GDP per capita becomes highly important once structural differences are accounted for, showing that higher levels of development strengthen M&A activity. Inflation and institutional quality play more ambiguous roles, with their effects depending on country context and market structure.

7.4 Model performance, robustness, and limitations

The explanatory power of the regression models varies across specifications. In the baseline and full models, the adjusted R^2 values are relatively modest (ranging from about 0.20 to 0.35), which is typical for cross-country panel data on M&A activity. Once country and year fixed effects are introduced, however, explanatory power increases sharply, with R^2 values exceeding 0.90. This indicates that much of the variation in M&A outcomes is driven by time-invariant country characteristics—such as institutional quality, history, and market structures—as well as by global shocks that affect all countries in a given year. These results reinforce the view that while volatility, growth, and FDI play important roles, structural traits and common shocks dominate the broader patterns of M&A activity.

It is important to again highlight that market capitalization was not included in the final regressions. Initial tests showed strong signs of endogeneity and multicollinearity, which would bias the results. Market capitalization is both an outcome of market development and a driver of it, making it problematic to use as an explanatory variable in this setting. For

transparency, the variable was introduced in the methodology chapter, but excluded from the empirical models.

These choices reflect a broader point: M&A is an extremely complex phenomenon. It is shaped not only by measurable macroeconomic indicators but also by softer factors such as investor confidence, legal frameworks, corporate governance, and strategic decision-making at the firm level. Because of this, creating an "optimal" environment that would universally foster M&A is almost impossible. What may encourage deals in one context could discourage them in another, depending on local conditions and timing.

Finally, the results should be understood with their limitations. While the models identify robust relationships—especially the role of volatility and the contrasting behaviour of emerging versus developed economies—they cannot capture every driver of M&A activity. The findings are therefore best interpreted as part of a larger picture. They provide valuable insights into broad patterns and tendencies but cannot fully explain the complexity of individual transactions or industry-specific trends.

8 DISCUSSION

This chapter builds on the interpretation of the regression results and places them in the context of existing literature. While chapter 6 explained what the results show, the aim here is to discuss what these findings mean and how they connect to previous research on M&A activity, stock market volatility, and macroeconomic drivers.

The discussion is structured around four main themes: the role of volatility, the differences between emerging and developed economies, the impact of macroeconomic variables and capital flows, and finally, the limitations and complexity of M&A.

8.1 Volatility and M&A activity

As discussed in the previous chapter, the regression results suggest that the relationship between stock market volatility and M&A activity is not linear but follows a U-shaped pattern. The negative coefficient on the volatility term indicates that as volatility rises from very low levels, M&A activity initially decreases. The positive coefficient on the squared volatility term then implies that beyond a certain threshold, this effect reverses and activity increases again. In other words, both very calm and highly turbulent markets are associated with lower deal activity, while moderate volatility appears to create the most favourable environment for transactions. Economically, this can be understood as follows: very stable markets may generate fewer restructuring opportunities, whereas extreme volatility introduces excessive uncertainty and discourages acquisitions. Moderate volatility, by contrast, reflects a dynamic setting with opportunities but without unmanageable risks, thereby stimulating M&A.

This pattern partially supports the initial hypothesis that countries with lower stock market volatility experience greater M&A activity compared to those with higher stock market volatility, after controlling for other factors. While high volatility indeed deters transactions, the results show that extremely low volatility is not optimal either. Importantly, when country fixed effects are included, both the linear and quadratic terms lose statistical significance. This indicates that the observed U-shape is at least partly driven by cross-country differences—such as institutional quality, financial development, or cultural attitudes toward restructuring—rather than purely by volatility itself. Hence, while volatility may influence M&A activity across markets, its role is secondary compared to country-specific structural factors.

These results are consistent with earlier studies that identify volatility as a central but ambivalent factor in corporate restructuring. Tabash et al. (2024) demonstrate that volatility shocks have persistent negative effects on investment flows, discouraging M&A activity in both developed and emerging markets. Similarly, Tripathy and Garg (2013) emphasize that volatility clustering contributes to prolonged instability, making large-scale acquisitions less attractive. At the same time, other studies highlight that moderate volatility can generate opportunities for well-capitalized acquirers. Kuzmina (2021), for example, argues that firms in financially robust environments use price fluctuations to identify undervalued targets, thereby exploiting short-term mispricing to create long-term strategic gains.

Evidence from event studies reinforces this dual perspective. Pessanha et al. (2016) show that M&A announcements in the Brazilian banking sector increase stock volatility in the short term, reflecting heightened uncertainty, but also open strategic windows for stronger institutions to expand their market share. Zhu et al. (2014) further demonstrate that idiosyncratic volatility plays an outsized role in emerging markets, where higher information asymmetry and weaker financial infrastructure magnify acquisition risks. This aligns with the present findings that volatility exerts a stronger and more destabilizing influence in emerging economies, while developed economies can better absorb fluctuations due to deeper capital markets and stronger institutional frameworks.

The evidence presented here therefore contributes to the debate by demonstrating that volatility's impact on M&A activity is contingent and nonlinear. Moderate volatility can facilitate opportunistic acquisitions, but extreme volatility deters deals. Moreover, the results suggest that developed economies, with deeper capital markets, are better equipped to transform moderate volatility into opportunity, whereas emerging economies experience stronger destabilizing effects at comparable levels of market turbulence.

8.2 Developed vs. emerging economies

The comparative analysis between developed and emerging economies revealed notable differences in how M&A activity responds to underlying market and institutional conditions. While the volatility models suggest a broadly similar U-shaped relationship across both groups,

it should be noted that once country fixed effects are introduced, the direct explanatory power of volatility weakens, indicating that much of the observed U-shape reflects structural cross-country differences rather than volatility alone. The results nevertheless indicate that emerging economies are more vulnerable to volatility shocks. Even moderate levels of turbulence can suppress deal-making in these markets, whereas developed economies are better able to absorb fluctuations due to deeper capital markets, stronger institutions, and more reliable access to financing.

This asymmetry aligns with findings in the literature, since Zhu et al. (2014) demonstrated that idiosyncratic volatility is especially destabilizing in emerging economies, where weaker financial systems and higher information asymmetry amplify risks for acquirers. Tabash et al. (2024) similarly report that volatility shocks exert longer-lasting negative effects in developing markets, as capital inflows are more sensitive to uncertainty. In contrast, Kuzmina (2021) emphasizes that developed markets can transform moderate volatility into opportunity, allowing financially robust firms to exploit mispricing and pursue strategic acquisitions. The thesis findings thus support the view that volatility is not uniformly detrimental, but its thresholds and implications vary by market maturity.

Beyond volatility, the model variants also suggest that structural country-level factors play a decisive role in shaping M&A patterns. Once country fixed effects are introduced, volatility loses explanatory power, underlining that institutional quality, governance, and financial development drive much of the cross-country variation. In this regard, the Economic Freedom Index provides additional insight. For developed economies, EFI is positively associated with both the number and value of transactions, suggesting that stronger institutional quality and economic liberalization support greater M&A activity. By contrast, in emerging economies the EFI coefficients are negative for both measures, indicating that liberalization may not always foster deal-making when institutional frameworks are weaker. This divergence implies that while higher levels of economic freedom facilitate restructuring in mature markets, in emerging ones they may increase competition or regulatory exposure without providing the institutional safeguards necessary to sustain acquisition activity.

These findings are consistent with prior literature, where Tunyi and Ntim (2016) show that improvements in governance quality and stock market development significantly increase M&A activity in African economies, highlighting the role of institutions. Similarly, Di Giovanni, (2005) finds that financial deepening is a key determinant of cross-border M&A flows, a result consistent with the stronger and more stable deal activity observed in developed markets. The divergence between developed and emerging economies also reflects differences in capital mobility and financing structures. Kandilov et al. (2017) show that cross-border M&A activity is heavily shaped by local credit conditions and source-country financial depth, with developed economies benefiting from more sophisticated financial intermediation. In emerging markets, by contrast, reliance on external finance and exposure to higher borrowing costs exacerbate the impact of volatility and weaken the resilience of M&A activity.

Overall, the evidence suggests that while both developed and emerging markets exhibit a non-linear relationship between volatility and M&A, the mechanisms differ. Developed economies are better positioned to capitalize on moderate volatility and sustain deal activity even in uncertain conditions, whereas emerging economies face sharper constraints, making their M&A activity more fragile and more heavily dependent on broader institutional and financial structures.

8.3 Macroeconomic variables

The regression results provide mixed evidence on the role of macroeconomic fundamentals in shaping M&A activity. Real GDP growth showed limited significance across specifications, suggesting that short-term output fluctuations are less influential than structural and institutional factors in driving deal-making. This outcome is consistent with Hsueh et al. (2014), who find little evidence that economic growth leads M&A activity once stock prices are controlled for. Instead, their results suggest that stock market conditions, rather than macroeconomic cycles, are the primary driver of acquisition dynamics.

Inflation, by contrast, displayed a more consistent negative association with M&A activity, particularly in emerging economies. High inflation not only eats away at firm valuations but also introduces macroeconomic uncertainty, raising the cost of capital and deterring acquisitions. This finding is in line with Barakat et al. (2015), who report that inflation exerts a destabilizing effect on stock markets in emerging economies such as Egypt and Tunisia, weakening the financial environment in which deals are negotiated.

Institutional and governance dimensions also interact with macroeconomic fundamentals to shape M&A flows. Tunyi and Ntim (2016) highlight that in African economies, improvements in governance quality and stock market development amplify M&A activity, suggesting that macroeconomic stability alone is insufficient without supporting institutions. This perspective resonates with the present findings, where country fixed effects absorb much of the explanatory power of macro variables, pointing to the primacy of structural and institutional conditions over cyclical ones.

Taken together, the evidence suggests that while macroeconomic variables such as growth and inflation influence the backdrop of M&A activity, they are not the dominant drivers once institutional and financial structures are accounted for. Stable macroeconomic conditions are necessary but not sufficient: capital market depth, access to finance, and governance frameworks ultimately determine whether cross-border capital flows can be translated into sustained acquisition activity.

8.4 Limitations and complexity of M&A

While the results provide valuable insights into the role of volatility, institutional quality, and macroeconomic conditions in shaping M&A activity, the analysis also highlights several limitations. These reflect both the challenges of empirical modelling and the inherent complexity of M&A.

One important limitation concerns the decision to exclude market capitalization from the final regressions. On one hand, market capitalization is closely linked to M&A activity, as larger and deeper capital markets tend to support higher deal volumes and values. Studies such as Di Giovanni, (2005) and Kandilov et al., (2017) show that financial depth and stock market development are important drivers of cross-border M&A. Including market capitalization would likely have increased the explanatory power of the models, however, preliminary tests revealed strong signs of endogeneity and multicollinearity since market capitalization is not only a driver of M&A but also an outcome of financial development and deal activity itself. Its inclusion would therefore risk biased estimates and misleading interpretations.

Another limitation arises from the treatment of volatility. Although the regression models reveal a U-shaped relationship—where both very low and very high volatility dampen activity, while moderate volatility encourages deals—this effect loses significance once country fixed effects are introduced. This suggests that the volatility effect is partly driven by structural cross-country differences. In addition, the EFI results underscore that institutional frameworks shape these dynamics in different ways across developed and emerging economies: EFI is positively associated with M&A activity in developed markets but negatively in emerging ones. These findings highlight that country-specific factors such as governance quality, regulatory stability, and access to finance can dominate volatility effects, making it difficult to isolate the role of individual macroeconomic variables.

Beyond this technical issue, it is essential to recognize that M&A is an extremely complex subject. Kuzmina, (2021) points out, the efficiency and dynamics of M&A transactions depend on many interacting factors, including stock market conditions, company characteristics, and broader institutional frameworks. Macroeconomic variables such as volatility or GDP growth can explain general patterns, but they cannot fully capture the motives, strategies, or industry-specific dynamics that drive individual transactions. Factors like corporate governance, managerial decisions, and political stability often play decisive roles that are not visible in country-level regressions.

This also means that creating an “optimal” environment for M&A is nearly impossible. What encourages deal-making in one context may discourage it in another. For example, high volatility may deter strategic acquisitions but encourage opportunistic takeovers, as shown in both this thesis and prior research (Zhu et al., 2014). Similarly, high levels of FDI may substitute for M&A in some economies while complementing it in others.

Taken together, these limitations do not reduce the value of the findings but rather place them in perspective. The models provide robust evidence of broad relationships—particularly the non-linear role of volatility, the divergent impact of institutional quality (EFI), and the greater sensitivity of emerging markets to macroeconomic shocks—while acknowledging that M&A activity is shaped by a much wider set of forces.

9 CONCLUSION

This thesis examined the relationship between stock market volatility and M&A activity, using a comparative framework across developed and emerging economies. The empirical analysis combined descriptive statistics, correlation matrices, and multivariate regressions, with models that controlled for macroeconomic variables, institutional quality, and fixed effects for countries and years. The central aim was to test the hypothesis that countries with lower stock market volatility experience greater M&A activity compared to those with higher volatility, after controlling for other factors, and to assess how this relationship differs between developed and emerging markets.

The results provide only partial support for the hypothesis. Stock market volatility is shown to matter, but not in a simple linear way. Instead, the regressions reveal a U-shaped relationship: both very low and very high volatility reduce deal activity, while moderate volatility creates the most favourable environment for acquisitions. However, once country fixed effects are introduced, the explanatory power of volatility weakens, indicating that much of the observed U-shape reflects structural cross-country differences—such as institutional quality and financial development—rather than volatility alone.

The comparative analysis shows that emerging economies are more vulnerable to volatility shocks, while developed economies are better equipped to absorb them due to stronger institutions and deeper financial markets. Institutional quality, measured by the Economic Freedom Index, reinforces this divergence: EFI is positively associated with M&A activity in developed economies but negatively in emerging ones, highlighting that liberalization fosters deals only where governance frameworks are strong.

Macroeconomic variables play a more limited role. Real GDP growth does not emerge as a consistent driver once institutions are accounted for, while inflation shows a clearer negative effect, particularly in emerging economies. This supports the view that macroeconomic stability provides an important backdrop, but financial depth and governance are ultimately more decisive in sustaining M&A flows.

Overall, this thesis demonstrates that M&A activity is shaped not only by volatility and growth, but also by deeper institutional and financial structures. Reducing volatility alone will not foster deal-making in a predictable way. Developed economies can more easily transform volatility into opportunity, while emerging economies remain more fragile and reliant on improvements in governance and market development to support sustainable acquisition activity.

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APPENDICES

Appendix 1: Multicollinearity diagnostics (VIF) for all model variants

Baseline model explanatory variables	GVIF
Volatility	20.57
Volatility^2	20.81
Real GDP growth	1.27
GDP per capita	3.98
Inflation rate	1.22
Dummy	4.26

Full model explanatory variables	GVIF	Df	GVIF^(1/(2*Df))
Volatility	29.15	1	5.40
Volatility^2	26.20	1	5.12
Real GDP growth	2.40	1	1.55
GDP per capita	4.57	1	2.14
Inflation rate	1.56	1	1.24
Dummy	6.67	1	2.58
FDI	6.93	1	2.63
EFI	1.30	1	1.14
Year FE	5.30	13	1.07

Fix effects model explanatory variables	GVIF	Df	GVIF^(1/(2*Df))
Volatility	29.56	1	5.44
Volatility^2	26.06	1	5.10
Real GDP growth	2.40	1	1.55
GDP per capita	7.23	1	2.69
Inflation rate	3.22	1	1.79
FDI	1.81	1	1.34
EFI	6.14	1	2.48
Country FE	2,712.43	19	1.23
Year FE	14.39	13	1.11

Appendix 2: Robustness check

Robustness check 1

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Volatility	-31.07***	-0.21**
	(11.97)	(0.09)
$Volatility^2$	51.27**	0.35**
	(23.59)	(0.18)
Real GDP growth	9.64	0.11*
	(7.72)	(0.60)
GDP per capita	0.00	-0.00
	(0.00)	(0.00)
Inflation rate	1.13	-0.00
	(3.83)	(0.03)
Dummy	-2.30***	-2.64***
	(0.89)	(0.68)
FDI	-0.00***	-0.00***
	(0.00)	(0.00)
Observations	280	280
R-squared	0.177	0.159

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.

Robustness check 2

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Volatility	-26.77**	-0.23**
	(12.16)	(0.09)
Volatility^2	46.89**	0.37**
	(23.61)	(0.18)
Real GDP growth	11.99	0.10*
	(7.80)	(0.06)
GDP per capita	-0.00	-0.00
	(0.00)	(0.00)
Inflation rate	2.83	-0.01
	(3.93)	(0.03)
Dummy	-1.24	-3.00***
	(1.06)	(0.83)
FDI	-0.00***	-0.00***
	(0.00)	(0.00)
EFI	134.91*	-0.46
	(75.69)	(0.59)
Observations	280	280
R-squared	0.186	0.161

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.

Appendix 3: FE model with change in volatility

	Dependent variables:	
	M&A Value (in bn)	Number of deals (in k)
Volatility change	0.39	0.07
	(0.34)	(0.19)
Volatility change^2	-0.08	-0.01
	(0.24)	(0.14)
Real GDP growth	6.16	0.05*
	(4.44)	(0.02)
GDP per capita	0.01**	0.00***
	(0.00)	(0.00)
Inflation rate	0.17	-0.01
	(2.03)	(0.01)
FDI	-0.00***	-0.00
	(0.00)	(0.00)
EFI	-18.63	-0.41
	(55.13)	(0.31)
Year FE	Yes	Yes
Country FE	Yes	Yes
Observations	280	280
R-squared	0.921	0.957

Note: Standard errors in parentheses. Asterisks are associated with the coefficients in the table '***' $p < 0.01$; '**' $p < 0.05$; '*' $p < 0.1$

Source: own work.