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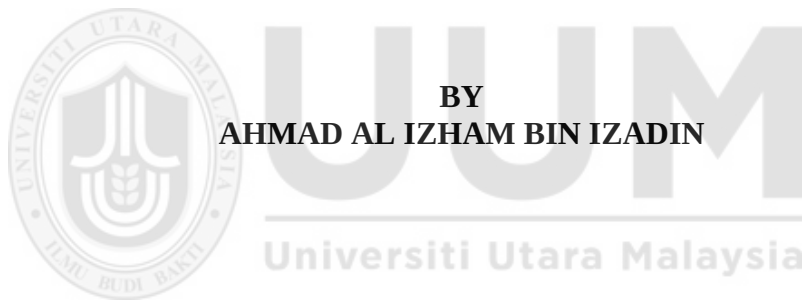
**THE STOCK-CRYPTOCURRENCY CORRELATION IN THE
ASEAN +3 REGION: THE ROLE OF INVESTOR
ATTENTION AND HERDING**



AHMAD AL IZHAM BIN IZADIN

**DOCTOR OF PHILOSOPHY
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**THE STOCK-CRYPTOCURRENCY CORRELATION IN THE ASEAN +3
REGION: THE ROLE OF INVESTOR ATTENTION
AND HERDING**



**BY
AHMAD AL IZHAM BIN IZADIN**

**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
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**OTHMAN YEOP ABDULLAH GRADUATE SCHOOL OF BUSINESS
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Tandatangan
(Signature)

Tarikh: **15 Disember 2025**
(Date)

Nama Pelajar
(Name of Student) : **Ahmad Al Izham Bin Izadin**

Tajuk Tesis / Disertasi
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Nama Penyelia/Penyelia-penyelia
(Name of Supervisor/Supervisors) : **Assoc. Prof. Dr. Ahmad Rizal B. Mazlan**



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Abstract

The ASEAN+3 region, particularly Indonesia and the Philippines, has exhibited some of the highest levels of international cryptocurrency adoption. However, limited research has examined the influence of behavioral factors on the integration of cryptocurrencies, including Bitcoin, into conventional financial markets such as stock markets. This study investigates the behavioral drivers underlying the correlation between stock markets and cryptocurrencies in the ASEAN+3 economies, comprising Singapore, Indonesia, Thailand, Malaysia, the Philippines, Japan, China, and South Korea. Panel autoregressive distributed lag (ARDL) and dynamic conditional correlation multivariate GARCH (DCC-MGARCH) models were applied to an extensive dataset spanning from 2014 to 2024 to capture both long-term and short-term trends, using EViews and R for analysis. The results indicate that heightened international market uncertainty and increased investor attention significantly strengthen the long-term correlation between stock and cryptocurrency markets, with herding behavior further reinforcing this relationship. In contrast, greater investor attention weakens the short-term correlation, suggesting speculative divergence, although herding behavior temporarily enhances the linkage during such periods. These findings suggest that emotionally driven, retail-dominated trading behaviors have a stronger influence in the ASEAN+3 region compared to more developed markets, such as South Korea, Japan, and Singapore. This study contributes to the literature by elucidating the role of domestic behavioral dynamics in shaping stock–cryptocurrency interdependencies and by integrating modern portfolio theory with behavioral finance perspectives. Policymakers should leverage these findings to improve existing regulatory frameworks and more effectively protect retail investors, who may be the most vulnerable group amid the rapid growth of cryptocurrency transactions.

Keywords: Behavioural Finance, Investor Attention, Herding Behaviour, Cryptocurrency, Correlation

Abstrak

Wilayah ASEAN+3, khususnya Indonesia dan Filipina, telah mencatat tahap penerimaan mata wang kripto yang tinggi di peringkat antarabangsa. Walau bagaimanapun, kajian mengenai tingkah laku yang mempengaruhi integrasi mata wang kripto, termasuk Bitcoin, ke dalam pasaran kewangan konvensional seperti pasaran saham amat terhad. Kajian ini meneliti pendorong tingkah laku yang mendasari korelasi antara pasaran saham dan mata wang kripto di dalam ekonomi ASEAN+3, yang merangkumi Singapura, Indonesia, Thailand, Malaysia, Filipina, Jepun, China dan Korea Selatan. Model panel autoregressive distributed lag (ARDL) dan dynamic conditional correlation multivariate GARCH (DCC-MGARCH) digunakan ke atas set data dari 2014 hingga 2024 untuk mengkaji kedua-dua trend jangka panjang dan jangka pendek, dengan menggunakan EViews dan R untuk analisis. Hasil kajian menunjukkan bahawa peningkatan ketidakpastian pasaran antarabangsa dan tahap perhatian pelabur yang lebih tinggi memperkuat korelasi jangka panjang antara pasaran saham dan mata wang kripto, dengan tingkah laku herding turut menguatkan hubungan tersebut. Sebaliknya, perhatian pelabur yang tinggi melemahkan korelasi jangka pendek, mencadangkan kehadiran aktiviti spekulatif, walaupun tingkah laku herding secara sementara meningkatkan hubungan dalam tempoh tertentu. Dapatan ini merumuskan bahawa tingkah laku dagangan yang didorong emosi, sikapdominasi pedagang runcit memberikan kesan lebih ketara di rantau ASEAN+3 berbanding pasaran lebih maju seperti Korea Selatan, Jepun, dan Singapura. Kajian ini menyumbang kepada literatur dengan menjelaskan bagaimana dinamika tingkah laku domestik membentuk hubungan saling kebergantungan antara pasaran saham dan mata wang kripto, di samping mengintegrasikan teori portfolio moden dengan perspektif kewangan tingkah laku. Penggubal dasar harus memanfaatkan penemuan ini untuk menambah baik rangka kerja peraturan sedia ada dan melindungi pelabur runcit dengan lebih berkesan, kerana mereka mungkin merupakan kumpulan yang paling terdedah dalam pertumbuhan pesat transaksi mata wang kripto.

Kata kunci: Kewangan tingkah laku, Perhatian pelabur, Tingkah laku herding, Mata wang kripto, Korelasi

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2025 proved to be an intense and demanding period during which I pushed myself into overdrive. With Allah's mercy, I successfully passed my colloquium, proposal defence, and viva. During this time, I published six papers in Scopus and Web of Science Q2 and Q3 journals, most as first author, with a further twelve currently under review. I also reviewed sixteen articles for high-impact journals and secured three fully funded opportunities to present my work at prestigious international conferences.

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To those who read this work, I hope this journey serves as a quiet reminder that perseverance often unfolds in silence and uncertainty. Progress is not always linear, and meaningful achievements are frequently shaped by disappointment. As the saying goes, “It does not matter how slowly you go, as long as you do not stop.” This PhD stands as a testament to moving forward, even when the path is unclear.

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List of Abbreviations

Abbreviation	Full Term / Description
ADF	Augmented Dickey–Fuller Test
ARDL	Autoregressive Distributed Lag Model
ASEAN	Association of Southeast Asian Nations
ASEAN+3	ASEAN plus China, Japan, and South Korea
BTC	Bitcoin
CSAD	Cross-Sectional Absolute Deviation (herding measure)
DCC-MGARCH	Dynamic Conditional Correlation – Multivariate Generalized Autoregressive Conditional Heteroskedasticity
ETF	Exchange-Traded Fund
GFC	Global Financial Crisis
VIF	Variance Inflation Factor
VIX	Chicago Board Options Exchange Volatility Index
UCRY	Cryptocurrency Uncertainty Index

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The topic related to the incorporation of cryptocurrencies into conventional financial sectors and relevant influences on financial portfolio diversification has continuously garnered traction. Particularly, Bitcoin is recognised as the most popular cryptocurrency, wherein a unit of Bitcoin was at \$100,000 in December 2024. The trend has indicated a higher adoption rate via pertinent channels, including strategic purchases by asset managers (BlackRock or Fidelity) and Bitcoin-supported ETFs (Exchange Traded Fund) (Ray, 2024). Meanwhile, the financial value of existing cryptocurrencies is constantly turbulent. The value of Bitcoin has increased by 125% in 2024 (Iacurci, 2025), which has led to doubts regarding the relationship with conventional stock markets among policymakers, investors, and market analysts owing to the potential impact on financial market stability, portfolio diversification, and risk management.

An increasingly positive linkage between stocks and cryptocurrencies propounds higher financial integration rates, which may reduce the diversification advantages of cryptocurrency assets (Jamil et al., 2023). Contrarily, a weak or negative relationship suggests that cryptocurrencies could assist in protecting against equity market downturns or financial uncertainties (Tarchella et al., 2024). Thoroughly comprehending the relationships among emerging economies is critical as various regulatory frameworks and investor behaviours can further aggravate financial turbulence (Sinalapetes et al., 2023). The higher participation level of institutional investors in cryptocurrency markets also suggests altering financial dynamics, which

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