

Chapter 4

Analysis of Systemic Risk in the Asia Region

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ABSTRACT

The primary objective of this research is to investigate the systemic risk prevalent within the Asian region during the year 2023. During this analysis, we utilize SRISK as a quantitative measure for systemic risk, aiming to encapsulate the pressure and prospective systemic repercussions confronting financial institutions across various nations. These metrics serve not only to assess the susceptibility of individual financial entities but also to consider the interconnections among them, alongside the relationships between systemic risk and determinants such as Gross Domestic Product (GDP), market capitalization, and the aggregate assets of each nation. The empirical findings suggest that the magnitude of systemic risk attains its maximum in the interval spanning from 2020 to 2023. The nations that are most significantly impacted by systemic risk are identified as China and Japan.

1. INTRODUCTION

Systemic risk denotes the potential for adverse consequences stemming from the failure or breakdown of a corporation, sector, financial entity, or an entire economic system. It encompasses the threat of a substantial disintegration within the financial framework, which transpires when capital providers, including depositors, investors, and capital markets, experience a loss of confidence in the capital users, such as banks, borrowers, and leveraged investors, or in a particular medium of exchange, including the US dollar, Japanese yen, or gold. Systemic risk is an intrinsic attribute of a market system and is ultimately inescapable. The principal attribute of systemic risk is its propagation from weaker institutions to comparatively more robust ones via a transmission mechanism. The cascading effect resulting from systemic risk can exert a deleterious influence on an economy. The management and alleviation of systemic risk represent a critical concern for regulatory authorities, particularly in light of the consolidation

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within the banking sector that has facilitated the emergence of exceptionally large financial institutions (Derbali, 2017b; Derbali and Sy, 2016).

In the wake of the global financial crisis of 2008, financial regulators redirected their attention towards bolstering the resilience of the banking system against economic perturbations. They instituted firewalls designed to mitigate the repercussions of systemic risk. Furthermore, regulatory bodies formulated prudent microeconomic and macroeconomic strategies with a heightened focus on prudential regulation, establishing protective measures to ensure the stability of the financial system. Macro-prudential regulation aspires to safeguard banks or the financial system at large, whereas micro-prudential regulations concentrate on the oversight of individual financial entities, including commercial banks, payday lenders, and insurance firms.

The financial crisis initially emerged in 2007 within the United States subprime mortgage sector. Ultimately, the dissolution of the housing bubble precipitated a profound housing and mortgage crisis in the United States. This scenario instigated a liquidity and credit squeeze that permeated all credit and financial markets. Collectively, these factors culminated in an unanticipated economic panic of substantial proportions.

The economic panic precipitated a pervasive recession in the United States, which subsequently induced a pronounced decline in global and trade investments. The recessionary repercussions also permeated the most advanced economies. The execution of recessionary policies further encumbered the banking system. As a result, the banking crisis escalated into a sovereign debt crisis and ultimately transformed into a comprehensive international banking crisis with the downfall of Lehman Brothers, an investment bank. The excessive risk-taking behaviors exhibited by Lehman Brothers and other financial institutions exacerbated the global financial ramifications. These outcomes collectively intensified the recessionary circumstances.

Subsequently, the crisis was succeeded by a worldwide economic decline referred to as the Great Recession during the years 2008-09. This event was subsequently accompanied by the European sovereign debt crisis, which had significant repercussions on the banking systems of nations utilizing the euro. While the recession reached its nadir in late 2009, nations encumbered by debt arising from the financial crisis endured extended periods of sluggish economic growth. The fundamental principle underlying insurance and investment resides in the diversification of risk. Hence, it is essential to scrutinize the potential constraints on risk diversification. One prominent constraint emerges from the existence of systemic risk, which exerts influence on all policies concurrently (Figure 1).

The primary aim of this paper is to examine systemic risk within the Asian economies in the year 2023. In this investigation, we employ SRISK as a quantitative measure of systemic risk, with the objective of capturing the stress and potential for systemic emergence within financial institutions across each nation. These metrics not only evaluate the susceptibility of individual financial entities but also consider the interrelations among them, as well as the associations between systemic risk and GDP, market capitalization, and total assets of each country. The empirical results indicate that the intensity of systemic risk reaches its maximum during the timeframe spanning from 2020 to 2023. The nation's most adversely impacted by systemic risk are China and Japan, albeit to varying extents.

Our manuscript is structured as follows: the second section offers a comprehensive literature review. The third section delineates the methodology and econometric model that will be employed. The fourth section articulates the empirical findings derived from the specified model. Ultimately, the fifth section draws conclusions from our research.

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