

# Chapter 3

## Predicting Global Financial Meltdown and Systemic Banking Failure: An Assessment of Early Warning Systems (EWSs) and Their Current Relevance

**Shefali Virkar**  
*University of Oxford, UK*

### ABSTRACT

*The last two decades of international financial history have witnessed an unprecedented increase in the number of episodes of financial distress; wherein the incidence of these episodes has not been restricted to national boundaries as localised systemic incidents but have instead been spread to other countries and across regions in the form of financial contagion. This book chapter proposes a detailed discussion and analysis of the scholarly and practitioner literature used to conceptualise and to encapsulate the theoretical construct of an Early Warning System (EWS) developed to predict and mitigate the onset and persistence of systemic banking failures and financial crises. The models that constitute the focus of this overview are pivotal to the prediction of systemic banking meltdowns, either on their own or as constituent elements of other methodological approaches that contribute significantly towards the design and development of an Early Warning System.*

### INTRODUCTION

For any economy to be healthy, a strong financial system is required to efficiently move funds from unproductive to productive economic agents. In this respect, banks play an important role; by transforming short-term deposits into liabilities issued by firms, by monitoring borrowers on behalf

of depositors, and by facilitating key financial transactions within the local, national, and global economy. Of all the existing financial institutions, the role of banks and hedge funds is thus considered immutable in the global financial setup, as their very presence and structure not only reduce the problems of adverse economic selection, of moral hazard, and of asymmetric information, but also

DOI: 10.4018/978-1-4666-9484-2.ch003

cement the success of the overall role played by the banking system in the world economy through aggressive monitoring.

Recent decades have been overshadowed by a series of systemic banking crises that have left many parts of the developing world gasping for breath. Many of the world's most promising economies, in particular those of Mexico and the East Asian tigers, have been unable to predict the onset of such financial meltdowns, and have consequently been hit hard both during and in the aftermath of global systemic banking and financial services misadventures. With the global economy beginning to emerge from the most recent financial upset, capital is flowing back to emerging market economies (*EMEs*); allowing countries with limited savings to attract financing for productive investment projects, to foster the diversification of investment risk, to promote intertemporal trade, and to contribute to the development of international financial markets. However, whilst it is widely accepted that financial crises have adverse consequences for an economy as a whole, relatively little theoretical or empirical work has been conducted to investigate the mechanisms by which these global financial meltdowns might be foretold and subsequently mitigated, and the economic and socio-political factors that are responsible for problems generated at either a macro- or a micro-level of the global financial services sector.

## **OBJECTIVE OF THE STUDY**

In the light of available evidence, this book chapter therefore attempts to examine, at their most definitional, Early Warning Systems (or *EWSs*) constructed to predict, pre-empt and mitigate systemic financial outages; together with the political, economic, and societal causes and impacts of global systemic banking and financial crises. More specifically, the research enumerates and analyses the role of both macroeconomic and

microeconomic factors in precipitating such crises through a critical examination of the existing literature, and by attempting to illustrate the scope and reach of each factor with examples from key pan-global financial catastrophies. The work will also attempt to highlight the interplay of different economic and financial factors causing systemic banking and financial instability, and to root them in similar real world examples.

The East Asian Crisis of 1998 and the collapse of the U.S. Subprime Mortgage Markets in 2007-08 are of particular interest to the study of Early Warning Systems, and are both used regularly as prime examples of exceptions to the general heuristic rule of international financial meltdowns. More specifically, this book chapter will take note of and draw on these examples in the light that neither appear to follow either the model of a *first generation crisis* resulting from runaway fiscal deficits caused by poor exchange rate management, the model of a *second generation crisis* brought on by what Krugman (1999) terms *macroeconomic temptation* or poor, over-indulgent economic policy setting, or their iterative *third generation crisis* counterparts. Instead, both crises may be seen as global financial upheavals brought on by worldwide financial excess and eventual systemic banking and financial collapse.

## **FINANCIALISATION AND GLOBAL FINANCIAL MELTDOWN**

The global economy has, over the past two decades, experienced profound changes and, in recent years, has found itself newly emerged from a protracted phase of economic and financial over-accumulation (Montgomerie, 2008; McNally, 2009). The dominant feature of this era has been the dramatic changes that have transpired in the realm of finance, where the pervasive crisis of over-consumption has been characterized by chronic excesses of productive capacity in the manufacturing and financial sectors of national

32 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/predicting-global-financial-meltdown-and-systemic-banking-failure/140066](http://www.igi-global.com/chapter/predicting-global-financial-meltdown-and-systemic-banking-failure/140066)

## Related Content

---

### Carbon-Efficient Supply Chains

Christos Kalogeropoulos, Eleftheria Missou, Nikolaos Elias Pavlis and Dimitris Psychoyios (2015). *International Journal of Corporate Finance and Accounting* (pp. 1-24).

[www.irma-international.org/article/carbon-efficient-supply-chains/134861](http://www.irma-international.org/article/carbon-efficient-supply-chains/134861)

### New Generation Cooperatives as a Response to the Economic Crisis in Greece

Ioannis Galatoulas, Panagiota Sergaki, Konstantinos D. Apostolopoulos and Aristidis Papagrigroriou (2018). *International Journal of Corporate Finance and Accounting* (pp. 37-50).

[www.irma-international.org/article/new-generation-cooperatives-as-a-response-to-the-economic-crisis-in-greece/208672](http://www.irma-international.org/article/new-generation-cooperatives-as-a-response-to-the-economic-crisis-in-greece/208672)

### Macroeconomic Sensitivity, Risk-Return Trade-Off and Volatility Dynamics Evidence From Developed and Developing Markets

Faisal Khan, Hashim Khan, Saif Ur-Rehman Khan, Muhammad Jumaa and Sharif Ullah Jan (2019). *International Journal of Corporate Finance and Accounting* (pp. 1-16).

[www.irma-international.org/article/macroeconomic-sensitivity-risk-return-trade-off-and-volatility-dynamics-evidence-from-developed-and-developing-markets/227417](http://www.irma-international.org/article/macroeconomic-sensitivity-risk-return-trade-off-and-volatility-dynamics-evidence-from-developed-and-developing-markets/227417)

### Innovation, M-Banking, and Customer Satisfaction: An Empirical Evidence From Bangladesh

Syed Moudud-UI-Huq (2021). *International Journal of Corporate Finance and Accounting* (pp. 47-64).

[www.irma-international.org/article/innovation-m-banking-and-customer-satisfaction/270937](http://www.irma-international.org/article/innovation-m-banking-and-customer-satisfaction/270937)

### Survey of Recent Development in the Literature of Financial Market Development and Economic Growth

(2014). *Post-Keynesian Empirical Research and the Debate on Financial Market Development* (pp. 14-31).

[www.irma-international.org/chapter/survey-of-recent-development-in-the-literature-of-financial-market-development-and-economic-growth/108148](http://www.irma-international.org/chapter/survey-of-recent-development-in-the-literature-of-financial-market-development-and-economic-growth/108148)