



**The Impact of the Subprime Crisis
on Global Financial Markets,
Banks and International Trade**

A QUEST FOR SUSTAINABLE POLICIES

INDRANARAIN RAMLALL

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Financial Markets, Banks and International Trade:
A Quest for Sustainable Policies

By

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P U B L I S H I N G

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*Dedicated to my parents, the reason for my existence, and to God for
granting me the strength to write this book.*

*“Success is not final, failure is not fatal:
it is the courage to continue that counts.”
—Winston Churchill*

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PREFACE

With the occurrence of the US crisis, international focus has shifted from finance to financial stability, especially when vigorous efforts have been channelled worldwide to preserve financial stability. Financial stability constitutes a fascinating area by virtue of its inherent connection to a plethora of directly or indirectly related issues, including macroeconomic stability, debt sustainability and banking sector stability, amongst others. Interestingly, financial stability is so important that I strongly believe that the mandatory policy of any central bank in the world should be first and foremost to preserve financial stability, followed by price stability. The reason is that price stability is a necessary but not sufficient condition for financial stability. Beyond that, financial stability is more encompassing and hence best captures the whole intricacies of an economy's risks, let alone inflation risks.

I have written this book keeping in mind a broad audience. The book offers analyses of financial stability risk assessment at three main levels, namely international financial markets, banks and international trade. The research is innovative, timely and highly luscious in terms of policy implications. I believe that these three areas constitute the core fundamentals prerequisite for the smooth functioning of the global financial system. I coin the term "Egonomics" to label the wrong application of "Economics" in view of concentrating benefits to certain parties at the expense of deadweight losses to society. Many cases of "Egonomics" have been identified during the crisis and are reported in this book.

Today, the world is buffeted by three main crises, namely, debt crisis, ageing population and climate change. In that respect, it is utterly misleading to focus solely on policies to curb a debt crisis. Indeed, having too much emphasis laid upon debt sustainability issues signifies scaling up the level of Gross Domestic Product, even at the expense of witnessing a considerable increase in the level of CO² emissions. In a similar manner, issues relating to a growing ageing population are gaining momentum in developed economies; this gnaws at savings levels and subsequently ricochets into subdued future growth prospects. To deal with these crises, new policies have also been suggested.

I hope that the book will incite new thinking and open up possibilities for invigorating research. The book has been written for academicians,

policy-makers, regulators and researchers. It can also be used as a research text in the area of financial stability. I welcome any comments from readers.

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CHAPTER ONE

INTRODUCTION

Today, financial stability lies at the heart of any financial system in the world. Financial system stability is demonstrated by the capacity of a financial system to bear external shocks without engendering significant impairments on its macroeconomic activities. Alternatively stated, financial stability signifies the ability of the financial system to be resilient against any unexpected shocks. Financial stability can also be defined as a situation whereby there is public trust in the financial system. Conversely, financial instability pertains to a situation where even a small negative shock can create drastic and adverse consequences. By default, financial stability is deemed to be a public good because any financial crisis is symptomatic of market failure. The US crisis constitutes a major lesson to humanity in terms of devising new policies to consolidate the resilience of the world financial system.

One of the most widely used methods of gauging financial stability pertains to systemic risk assessment, in view of sieving out any potential threat that can spark off detrimental consequences onto the real economy. For instance, in the case of households, a fall in the share prices of their stock holdings not only eats up their wealth but also undermines their consumption of goods and services. Based on the fact that a systemic financial risk constitutes a rather rare event, it is usually not easy for the financial authorities to fully gauge the impact of such a risk on their economies. Notwithstanding, regulatory authorities should be on constant guard and regularly perform stress testing exercises.

To obviate any financial crisis, authorities usually wield two main tools: a macroprudential approach to deal with systemic risk (such as in systemically important institutions) and a microprudential approach to cope with institution-specific risk. Whenever distortions are exerted on financial markets, they impair on the efficient allocation of funds and result in subsequent costs to taxpayers. The severity of any crisis is principally assessed via its effects on the real economy and is mainly determined by the extent of financial system interconnectedness. For example, the stronger the interconnection between banks, firms and

households, the more pronounced the effects of financial instability tend to be. Larger financial systems constitute a double-edged sword. On one hand, it holds that the larger the financial system, the better its ability to absorb any given shock. On the other hand however, in the case of a large global shock, the larger the financial system, the stronger the transmission mechanisms are of the adverse effects.

The US subprime crisis, which started in 2007 with losses manifesting at two Bear Stearns hedge funds, left behind permanent scars on the financial system. Amongst all the financial crises that have buffeted the world, the US subprime crisis is considered unique. First, the amount of losses incurred were huge (estimated in October 2012 by Mark Adelson, former chief credit officer at Standard & Poor's, to hover around \$15 trillion); it is considered the worst crisis since that of the Great Depression of the 1930s. Second, the crisis manifested itself in a period of free trade, whereby positive shocks induced positive growth effects, while negative shocks generated strong contagion effects. Above all, globalisation strengthened the speed at which the crisis could spread throughout the world, since many countries allowed entry to foreign banks under the globalisation philosophy. Third, the crisis did not seem to end even after the use of distinct policies such as government bailouts (which were used in the case of American Insurance Group) or unconventional monetary policies (Quantitative Easing).

This book is organised into seven chapters, all imbued with innovative research and policies. The second chapter focuses on the causes, consequences and policies to adopt with respect to the US subprime crisis. The author points out the need for a country Financial Stability Fund that would cater not only for systemically important institutions but also for those institutions imbued with a strong level of interconnectedness. Among other proposed solutions, the author argues for greening or socialising the "cost of capital" as the best way to hedge against erratic business cycles and thereby mitigate losses. Moreover, the author finds that Financial Stability Reports are not published by all central banks (only around 38 per cent of all central banks do publish Financial Stability Reports). Above all, for those reports which are published, there is still a lack of harmonised features, timeliness concerns and extent of authenticity in reporting and even divergence when compared to IMF country reports. Concerted efforts between central banks and IMF/BIS staff would undeniably leverage the quality and comparability of Financial Stability Reports worldwide. Ironically, some countries have utterly ceased reporting Financial Stability Reports post the onset of the crisis.

The third chapter of the book develops a Global Financial Stability Multifactor Arbitrage Pricing Theory model to uncover any crisis-induced irrational exuberance. This is executed through the investigation of 29 world assets, with findings confirming potential irrational exuberance for certain assets. The Global Financial Stability Multifactor Arbitrage Pricing Theory model is expected to be widely used by policy-makers when assessing international asset risk. The fourth chapter of the book probes into banks' specific and macroeconomic factors under a pre- and post-crisis investigation by using a unique database based on country-wise aggregate banks' data. Findings show that capital strength and funding costs constitute the most important drivers for banks' profitability, considering the fact that Portugal, Italy, Greece and Spain were all subject to problems even before the crisis. The fifth chapter develops a credit risk model that focuses on the repayment capacity of developing countries in the world with specific focus given to international trade. Results show that international trade has been particularly stimulating during the pre-crisis period with a positive effect noted on the debt repayment capacity of developing countries. However, post the crisis, no such effects prevail. Such a finding adds significant momentum to the fact that the crisis may already be curbing growth prospects via the trade channel for developing countries, with potential rekindling effects on protectionism.

In the sixth chapter of the book, the author draws attention to the need to enhance public debt management functions. Ironically, with the onset of the crisis, this can constitute the proper time for developing countries to leverage their debt management strategies. In the last chapter of the book, the author comments on global policies to be adopted to mitigate against not only the US subprime crisis (debt crisis) but also two other crises which have already taken firm grip on society, namely an ageing population and the adverse effects of climate change. The author argues that global policies should be trident in dimension to mitigate against any potential backfiring effects. For instance, the international community seems to be so focused on the financial crisis that efforts to leverage economic activities may further aggravate carbon emissions worldwide. Similarly, ageing populations increasingly impinging upon developed countries has the effect of triggering significant strains on savings and growth prospects. The author argues for the establishment of long-term approaches to policies; social banks; green finance; radical changes in the work environment; limits to speculation in derivatives; a shift from "Egonomics" to "Economics;" checks on growth of the artificial economy, as well as a re-engineering of bank loans approvals via inclusion of sustainability reports.

For academics, the crisis can be viewed in something of a positive light—perhaps possessing an element of spiritually ingrained wisdom for humankind, if you will—since it provides the opportunity to rethink the world of finance and propose new theories. Only a theory can kill a theory; dead theories cause new theories to develop, which can in turn be utilised until they fail. In essence, the efforts dedicated towards scaling up wealth for years went to waste as the US witnessed massive losses. This may imply that the concept of equilibrium may need to be revised in terms of having equilibrium as a balancing state between the material world and the spiritual world.

CHAPTER TWO

CAUSES, CONSEQUENCES AND SOLUTIONS TO THE US FINANCIAL CRISIS

2.0 Introduction

Three financial experts are widely acclaimed to have predicted the global financial crisis. Nouriel Roubini is considered to be the father of the crisis as he anticipated the coming collapse of the US housing market. Charles Morris, author of the book *Trillion Dollar Meltdown*, published in 2008, also predicted the crisis in early 2007. Finally, George Magnus foresaw that the US subprime crisis would result in recessions. However, to date, there still exists no single and clear-cut explanation as to the cause of the US financial crisis. The underlying consensus is that a mixture of factors contributed to the crisis, including falls in house prices, securitisation, information asymmetry, low interest rates, and leverage effects of hedge funds. This chapter is split into three sections; Section 2.1 addresses the causes of the US crisis, Section 2.2 deals with its consequences, while Section 2.3 focuses on possible solutions.

2.1 Explanation on the chart explaining the schema of the crisis

I identify three main factors/forces that paved the way towards the US subprime crisis: core structural weaknesses or cracks, domestic shocks and external shocks as illustrated in Figure 1. The structural weaknesses refer to existing inefficiencies that permeated the unregulated banking sector of the financial system, such as long periods of deregulation following the repeal of the Glass-Steagall Banking Act of 1933 (no distinction between commercial banking and investment banking), real estate bubbles, opaqueness in securities, existence of information asymmetry, and perverse remuneration mechanisms. Domestic shocks pertain mainly to the fall in house prices, which acted as the catalyst for the crisis. External shocks refer to the burgeoning difference in current account positions

without proper adjustments in the exchange rates. For instance, despite the fact that China rejoiced over sustained current account surpluses, it strived even hard to maintain a low currency value. The crisis has also pointed out the importance of catering for endogenous risks, which had previously triggered harmful impacts onto the financial system via feedback effects.

(a) Macroeconomic liquidity risk: Large capital flows are usually associated with crisis periods. In the year 1973, oil-producing countries witnessed a significant rise in due to a fourfold hike in oil prices. These surplus countries channelled their monies to US banks that later lent them out to Latin American countries. However, the latter defaulted. Subsequently, Brady bonds were created to revamp the market debt instruments, allowing banks to alter their claims on developing countries into tradable instruments. Excess global liquidity coupled with limited assets usually constitutes the most germane conditions for the existence of asset price bubbles.

Ironically, the financial crisis appears to be something of a repetition of the above process. The source of the crisis emanated from macroeconomic imbalances at the international level based on current accounts imbalances and exchange rates misalignments; for example, China had been clinging to undervalued exchange rates for many years to boost exports and thereby accumulate burgeoning surpluses which then flew to the US economy. Based on the need to generate higher returns on these funds, US banks channelled these funds to local credit markets linked to mortgages. As cheap funds were present, this income boosted up the demand for mortgages, thereby engendering house price bubbles.¹ These price bubbles fed on themselves chiefly when higher house prices enshrined collateral values so as to induce more lending, which in turn led to higher house prices based on rising demand for houses.

(b) Securitisation: Credit risk transfer instruments consist of credit derivatives like Credit Default Swaps and credit securitisation like Collateralised Debt Obligations. Securitisation can be technically defined as the transformation of illiquid nonmarketable assets into liquid marketable ones, such as the pooling up of mortgage loans into liquid Collateralised Debt Obligations, which are then sold to investors. Without securitisation, banks would rely on deposits to provide loans to borrowers endowed with sound collaterals and repayment capacities. With securitisation, banks were

¹ Technically speaking, a bubble can be defined as a consistent and sustained divergence of an asset market price from its fundamental or intrinsic value.

able to transform the loans into securities that could be offloaded to investors. However, the issue of concern about securitisation pertains to a system whereby in lieu of effectively transferring the risks, banks were taking back the risks again via investments in the mortgage-backed securities—synonymous to pulling the gun's trigger upon oneself. This is depicted in Figure 1 as the red thick arrow connecting banks to mortgage-backed securities.

One of the causes of the crisis was improper use of securitisation. Securitisation was devised mainly for credit risk transfer to investors willing to bear credit risk. However, this innovative financial tool was misused by banks, who neglected their initial purpose by employing them principally to increase their leverage to such an extent that a negative shock would convert these off-balance sheets onto on-balance sheet modes.² This utilisation thereby substantially increased the exposure of banks. Consequently, securitisation camouflaged the separation of market and credit risk since banking book positions could be hedged using trading book instruments. Banks had strong incentives to scale up their components of asset-backed securities because the latter involved low capital weights based on their high ratings by rating agencies. These off-balance sheet instruments consisted mainly of asset-backed commercial paper and structured investment vehicles. Once the quality of these assets deteriorated, investors would have recourse to the banks, which would then provide both liquidity and credit enhancements.

As long as things remained rosy, banks would avail of such leverage to spur profits. However, once a negative shock emerged, it would have devastating consequences for both the bank, in terms of eroding away its' capital base, as well as the economy as a whole via the ripple effect. Consequently, banks were exposed to significant latent risks not truly captured by their capital base, which evidently burst into larger losses for banks having greater exposure to asset-backed securities. The irony of this is that latent risks built subsequent burgeoning latent risks which fed upon themselves, since by having lower risk weights for risky assets, the implicitly saved capital could be employed towards further leverage activities. The process was accentuated on the back of rising house prices, which acted as a real catalyst to the securitisation process. Consequently, once the bedrock component was affected, i.e. falling house prices, this engendered explosion in all parts of these intricate processes with direct

² All three types of conduits, whether fully supported conduits, partially supported conduits or structured investment vehicles, have recourse to the bank balance sheet.