A Decade After the Global Financial Crisis: Lessons and Policy for International Stability

Anjali Karol[1]

[1] Institute for Financial Management and Research (IFMR), Chennai, India

Correspondence: Anjali Karol, PhD Student, Institute for Financial Management and Research, University of Madras, Chennai, India.

Received: November 20, 2019 Accepted: January 15, 2020 Online Published: March 24, 2020

doi:10.5430/ijfr.v11n2p416 URL: https://doi.org/10.5430/ijfr.v11n2p416

Abstract

The Global Financial Crisis of 2007-09 has been the most severe global shock after the Great Depression of the 1930s. A crisis of this order has changed the outlook on international socio-economic integration and concerns on financial security and global polity. As we are a decade after the crisis, it is instinctively imperative to relook and analyse the lessons learnt and the policy responses that helped ease the crisis. This paper is an attempt in that direction. Research over the years suggests that global financial system has evolved into a more innocuous network at limited unintended costs. Globally policy regulations have tightened to lessen the impact of future crises and today most countries have some form of macro-prudential surveillance.

Keywords: global financial crisis, monetary policy, policy objectives, stability, bailout

JEL Codes: G01, G10, E50, F44, E61, F33, E30

1. Introduction

More than a decade back, the global financial system experienced one of the most severe crises in recent history, and the world is still grappling to recover from the aftermaths of the Global Financial Crisis (GFC) of 2007-09. Global stock markets plunged, unemployment escalated, economic growth receded, international trade descended, and inequality widened. Organisations deemed too-big-to-fail failed both in the financial and non-financial sector. The world witnessed several mergers, acquisitions, and government bailouts as a follow-up.

It all started with the housing market bubble in United States. Households borrowed in excess of their affordability taking advantage of lower interest rates; increasing housing prices. When housing prices started plummeting, households ended up with more debt than their house value. The recession and unemployment that followed led to loan defaults. The non-performance of complex derivative products built on these mortgages, collateralized debt obligations and credit default swaps made the situation distressing. These derivatives looked great in theory but concentrated the risks to large banks like Lehman Brothers and Bear Sterns rendering them insolvent (Lund, Mehta, Manyika, & Goldshtein, 2018).

With this introduction the paper proceeds as follows. The paper starts with a brief discussion on the important aspects of a crisis including the four essential forms of a crisis. It then proceeds to discuss what necessitated the creation of new databases after the GFC. Subsequently, it highlights how monetary policy objectives changed in the wake of the crisis and why central banks resorted to unconventional monetary policy. Next part summarises the main proposals given by Nobel Laureate Markowitz to increase transparency of complex financial instruments. Further, the paper discusses the need for standardisation of norms regarding crisis, debt defaults, bailouts policies and international laws and trials in the case of bailouts. The paper also analyses the two crucial accelerators of the GFC; the problems associated with a highly integrated financial system, and the overreliance of investors on credit rating agencies. The paper concludes by outlining the areas that require further research attention and reforms to enhance policy effectiveness.

2. Understanding the Important Aspects of a Crisis

Research suggests that financial crises are not purely random events and can be predicted well in advance. Not every recession ends up in a crisis. Recessions occur as part of regular business cycles and occur every eight years on an average. Crisis, on the other hand, occurs only every 25 years (Paul, 2019).A combination of various tools to test for

the health of macroeconomic and macro-financial conditions can help predict the onset of a new crisis. Excess credit growth in a booming economy is an essential indicator of a looming crisis (Jordà, Schularick, & Taylor, 2013). During prolonged expansions, banks increase their leverage and bank balance sheets become fragile, decreasing the resistance of economies to shocks (Paul, 2019). At the wake of a slowdown, output falls, and unemployment rises leading to credit defaults, mounting non-performing assets on bank balance sheets leading to higher plausibility for bank-runs. Regular and stringent banking supervision should ensure that financial instability does not loom under the carpet during economic growth phases.

There is massive literature on crisis but they also vary on how they define a crisis. The term crisis is often used as a blanket term for the simultaneous occurrence of one or more of the phenomena of economic slowdown, rising unemployment, falling stock markets, reduced faith in banking system and depreciating values of currency, stock prices, houses and other assets. Each of these phenomena has the potential to cause the other leading to their consequent simultaneous occurrence. Essentially, there are four types of crisis vis-à-vis financial crisis, economic crisis, banking crisis and currency crisis. A financial crisis is defined as a situation where there is sudden loss in the nominal value of financial assets. The term financial crisis also denotes stock market crashes, bursting asset bubbles, defaults of government bonds. An economic crisis is defined as an unforeseen substantial slump in the economy (Lee & Makhija, 2009). Economic crises are an outcome of macroeconomic instability and/or political instability.

According to Kaminsky et al. (1998), a currency crisis is defined as a sharp depreciation in the value of a currency or a massive decline in the country's foreign reserves, or the occurrence of both situations. A currency crisis puts to question the ability of the central bank to regulate the currency's exchange rate leading to a speculative attack on the foreign exchange market further depreciating the currency.

Episodes of risky lending by banks followed by periods of loan defaults render depositors faith in banking system plummet. This prompts depositors to suddenly withdraw funds ensemble leading to the threat of bank runs and rendering banks insolvent (Valencia & Laeven, 2012). Thus, there arises a banking crisis and the prime role of the governments and central banks shift to restoring investor confidence. This is done by bailing out insolvent banks, providing funding support, relaxing norms for mutually agreed period and by recapitalising bank balance sheets of ailing banks.

3. Data Issues and Creation of New Databases

The first step to analysing the impact of any event is collecting the necessary data. Multi-country data sets spanning over several years is essential to empirically examine events that have a global dimension and an impact that persists long after its happening. The data at our disposal to discern comprehensible trends and patterns is limited when it comes to financial crises, partly because crises are rare events (Paul, 2019), and partly because the quality of data available during downturns cannot be considered unbiased. Several macro-prudential, sectoral and regulatory changes happen across sectors and countries across the globe in too little time establishing new normals. This has direct ramifications on the quality of the data collected. Thus, the comparability and reliability of findings based on such data should be taken with a pinch of salt.

New databases are created in the aftermath of every crisis to make them available for ardent researchers. Together they add new variables, improve, and expand the existing framework. These new databases help to produce new analyses that were previously impossible or inefficient due to unavailability of sufficient and/or reliable data (Adrian, Liang, & Natalucci, 2019). What is important is to enhance the availability, affordability and accessibility of these databases to socio-politico-economic researchers.

Creating panel data helps to study the trends in own series and spillovers across series (Adrian, Liang, & Natalucci, 2019) enabling global estimations. This requires matching and linking several cross-sectional archives over the years. The struggle here lies in matching variables that change names, definition and collection techniques over various rounds (or years) of data collection. These are methodological issues in creating large, meaningful and reliable databases. Standard data policy needs to be in place to address these exigencies.

The International Monetary Fund (IMF) introduced a new database called The Global Debt Database (GDD) compiling data for private and public debt covering 190 countries and dating back to 1950. This database allows comparing mortgage across developed, emerging and low-income countries (Mbaye, Badia, & Chae, 2018). The European Central Bank created a new financial stress index and a new database for Financial Crisis in European Countries to compliment the efforts towards better economic stability in Europe.

4. Monetary Policy - Emphasis on Alternative Objectives

Major economic shocks lead to reassess the existing structure of monetary policy and pose the question of what qualifies as an upright and reliable monetary policy (set of tools and policy measures to control macroeconomic variables like inflation, growth rate, unemployment etc.). This episode of GFC raised exciting questions on the principal objective of monetary policy- is it solely inflation targeting (or price stability)? Other goals like ensuring full employment (a situation where resources of the economy are put to its most efficient use), stimulation of economic growth and exchange rate stability regained importance in the wake of the GFC.

Demand shifts in favour of government bonds and safe assets provided by the banking system following a crisis. Inflation remains low as monetary policy transmission, and price adjustments are comparatively weaker during the times of financial crisis. Only when private credit increases in the economy can inflation pick up and monetary policy transmission gain momentum. Boosting investor confidence by ensuring price stability and adequate liquidity is a precondition for revival. Therefore, liquidity management and boosting investor confidence prevailed over inflation targeting as essential considerations in front of central banks during the financial crisis (Cukierman, 2013).

4.1 Use of Unconventional Monetary Policy

Standard monetary policy often renders ineffective during crisis periods. For instance, expansionary monetary-policy did not contribute to inflation during the GFC, whereas it would have during periods of regular economic activity (Cukierman, 2013). Unconventional monetary policy tools like quantitative easing, tapering, interest on reserve requirements, margin requirements on loans over stocks, repos and bonds were used extensively by central banks to battle the crisis. Central banks also entered into currency swaps with foreign central banks (Sherman, 2009) for external credit and exchange rate stabilisation. Other noteworthy steps were the selective provision of liquidity to crucial markets to revive important markets and supply of excess credit to banks at rates over and above normal repo rates to help banks maintain reserve requirements and to prevent the plausibility of bank-runs.

Central banks also actively participated in facilitating mergers and acquisitions of ailing financial institutions. Federal Reserve helped facilitate JP Morgan Chase's acquisition of Bear Sterns by setting up a special purpose vehicle and provided emergency credit lines for ailing insurance company American International Group. Other liquidity measures like term auction facility beyond the discount window and short-term liquidity adjustment mechanisms to rescue ailing financial institutions were also set up as immediate policy responses (Sherman, 2009).

4.2 Openly Communicating Monetary Policy

Central banks also have the secondary responsibility of reducing the tendency for excessive risk-taking. This is important during the onset of a crisis to signal to debtors that credit expansion fuelled by excessive risk-taking may result in the creation of credit bubbles (Cukierman, 2013). To enhance investor confidence in the financial system of their respective countries, central banks hold occasional policy briefs. The frequency of such policy announcements increased during the GFC. In normal state of economic activity, the major central banks of the world meet and issue policy statements on an average 8 times a year (U.S. Federal Reserve -8, European Central Bank-bi-weekly, Bank of England- monthly, Bank of Japan-bi-monthly, Swiss National Bank-quarterly, Bank of Canada-8, Reserve Bank of Australia-11, Reserve Bank of New Zealand-8, Reserve Bank of India-6). In addition to these scheduled policy announcements, major central banks of the world issued several supplementary policy statements during 2007-09 to combat panic reactions and to instil faith in the recovery of the banking system in particular and the financial system at large from the on-going GFC. Remarkably, open communication affects asset prices significantly during a crisis (Lombardi, Siklos, & Amanda, 2019).

In the aftermath of the GFC, significant changes have been made in the way the monetary policy announcements are issued. Policy statements published by the Federal Reserve before the GFC focused only on the current state of the economy and on providing the rationale for rate changes. Post the crisis; policy statements included discussions on the direction of the economy, future trends of significant policy rates and the extent of agreement among committee members on any policy stance (Wynne, 2013). A study comparing the policy meetings of Federal Reserve prior to and post the GFC found that the average length of post meeting statements increased from 223 words prior to the crisis to 580 words post the GFC (Kliesen, Levine & Waller, 2018). The same study reveals that post the crisis, the number of public remarks by Presidents of various Federal Reserves increased from 150 (average from 1998 to 2004) to about 200 (2009-2016) per year. Concisely, Federal Reserve made efforts to increase transparency to provide accountability and credibility to policy declarations (Cecchetti & Schoenholtz, 2019).

5. Proposal by Harry Markowitz

Nobel Laureate Harry Markowitz came up with proposals aimed at increasing transparency in dealing with complex financial products (Markowitz, 2009). Though these proposals intended to help the US economy revive from the GFC, they are generalizable to other countries. Besides, stability of US markets is a precondition for global financial stability due to the prominence of US Dollar in the world market. Here we discuss two of his proposals.

5.1 Government Survey of Direct Exposures and Setting up a Clearinghouse

Conduct government-sponsored survey of companies that have direct and indirect exposure to sophisticated financial instruments like collateralized mortgage obligations (CMOs), collateralized debt obligations (CDOs) and credit default swaps (CDSs). A competent team of mathematicians, economists, computer programmers and clerks should dynamically create a database based on the survey, that traces out leverage level of each instrument and institution, underlying mortgages of each instrument, linkages and exposures (both direct and indirect) between various instruments, and also aggregate exposures into multiple categories. This database should also be circulated for the use of academicians, regulators, counterparties and shareholders and other interested parties to reduce counterparty-risk. Considering the fact that these exposures are bound to change overtime, a clearinghouse was required for overseeing daily reporting and updating of these exposures and linkages (Markowitz, 2009).

5.2 CDSs to Be Perceived as Insurance

A CDS is a derivative contract that provides protection to its buyer against probable losses in the event of credit defaults. CDS is enforced on the basis of a series of premium payments similar to insurance. Failure of businesses in a particular sector is highly correlated as it depends more on the overall performance of the entire sector. CDS provide insurance for these correlated risks that is not eliminated with diversification. Thus market regulators shall perceive them as insurance rather than swaps (Markowitz, 2009).

6. Optimum Transparency and Standardisation of Norms

Traditionally, the policy response to reducing market activity has been the induction of liquidity into the market. The problem of lack of business confidence in the financial system and industrial growth in the near quarters has been misunderstood largely as the problem of lack of liquidity. Central banks tried in vain to revive their domestic economy by injecting liquidity ending up with inflationary effects on commodities like gold and oil, which are perceived as safe assets. The prime reason for the lack of confidence is the lack of transparency in construction and trading of complex financial derivatives.

The prices of mortgages plunged setting households and businesses to a state of panic. Unemployment increased, household savings, investments and spending took a dip and demand for funds reduced further. In this vicious circle, stock markets crashed rendering several business and other entities bankrupt and insolvent. It was impossible for governments to adopt such losses owing to their scale and volume. As laborious the task was, it was practically impossible to trace back the purposeful defaulters and rightful victims of the asset bubble due to the lack of transparency in constructing financially engineered products. This crisis period underlined the fact that stringent documentation and accounting standards were essential to even enable appropriate government intervention. It was imperative to set up rigorous accounting standards and documentation systems for complex financial instruments to avoid future bubbles.

As a first step towards preparedness to combat future crisis, it is essential to have universally accepted norms on financial crisis. Stringent financial regulations, improved corporate governance of banking and financial companies, tightening of disclosure policies especially by emerging market economies is essential to ensure mutual stability in these interconnected financial networks. Prudent and timely implementation of financial reporting standards like International Financial Reporting Standards (IFRS) (Lin, Riccardi, Wang, Hopkins & Kabureck, 2019) and enhancing banking supervision and cooperation by way of adopting Basel norms ensure better preparedness. Apart from this self-regulation and self-disclosure by highly leveraged players like banks and big financial institutions, ensure peer-to-peer enforcement.

Despite the multitude of models to predict the time and occurrence of financial crisis and its probable impact on various sectors, and spillovers to other economies; crisis still occurs unexpectedly and contagion spreads from markets to markets. A number of interesting interpretations arise from this fact. One, prediction models fail to predict the timing and gravity of the crisis. Two, international financial practitioners have failed to find an effective way to control contagion effects and speculative attacks. Three, the definition of crisis and other related terms differ from sector to sector and from country to country. Consequently, multi-sectoral data and multi-country data collected from various sectors or countries do not have similar nature and hence cannot be compared. Four, soon after a crisis hits a

country, it sets its financial system into a state of turmoil. The ensuing speculative attacks exacerbate the deteriorating financial system. This points to the fact that there is an absence of standard policy framework as a first response to crisis.

The looming threat of default that was present even years after the crisis had caused jittery repercussions on the socio-politico-economic systems. The debate on what constitutes effective policy response continues even today. The political mismanagement of crisis, delays in acknowledgment, disregarding the gravity of its impact and deficiency of appropriate policy framework led to fiscal distress and political instability in several countries like Greece, Portugal and Spain. Consensus on the definition of crisis as understood by all stakeholders makes timely implementation of crisis response policies viable and disbursal of stimulus packages effective and efficient.

7. Policy on Bailouts

Government bailout policy has always been controversial and debatable. The GFC necessitated large-scale bailouts involving government support across the world. The Eurozone crisis started as an aftermath of the GFC as a series of losses resulting from the exposure to US subprime mortgages not only stressed the balance sheets of European banks but also undermined the sustainably of public debt across Europe. Greece, which was battling trade deficits after its entry into the Eurozone, went into a government-debt crisis as an impact of the GFC. Greek government implemented a series of tax-hikes, cuts in government spending and other austerity measures leading to widespread protest in the country resulting in socio-political turmoil and extensive brain drain. Spain, Cyprus, Ireland and Portugal also fell into a debt-trap as governments tried to save over-indebted banks. Real-estate non-payments led to ailing banks that had to be bailed out by the government. As a series of austerity measures and maintaining balanced budgets, these struggling Eurozone countries revived their market access and growth by 2014.

Concisely, governments had to bailout indebted banks, and this was funded by austerity measures; that means by shifting the burden on to the taxpayers. This helps to revive confidence in the financial system but creates political instability as taxpayers revolt against penalising them for state-funded bailouts. As taxes rise, disposable income plunges taking a hit on consumption demand, which in turn slows down economic growth. A trade-off between reviving confidence and the economic costs of such bailouts puts into question what is the cost-benefit balance of such policies. Bailout policies faced criticism for promoting unwarranted risk-taking by banks and other financial institutions for creating a moral hazard and indirectly leading to bubble formation.

8. International Laws and Trials in Cases of Default

Crises though unpredictable to a large extend and uncertain in their gravity are bound to occur. Once a crisis occurs, chaos, asymmetric information, lack of adequate information, political and economic uncertainty reigns. Creation of insolvency laws, default protection plans and supervision of leverage build-up will be required. These laws shall aim for stability as an immediate objective and restructuring the economies as a next stage objective. Absence of statutory provisions for restructuring of ailing institutions drives them insolvent.

Often when a crisis arises, fiscal policy and monetary policy ensemble efforts to revive the domestic financial system. They resort to protectionism as a short-term objective hard-hitting foreign companies and branches of foreign banks and foreign financial institutions. Complex financial products often take inputs from other exotic derivatives (Markowitz, 2009). The underlying asset can be products issued in a different country. These products also enter the portfolio of foreign investors who could be speculators, long traders or large funds. This way the performance of domestic financial products is dependent on both domestic and foreign factors. The presence of foreign banks and foreign financial institutions also upsurge the vulnerability of domestic economy to external shocks.

The role of international law emerges here. International laws expedite security and predictability in the international socio-politico-economic order. They provide relief to vulnerable nations to strike equally advantageous cooperation with larger nations in the face of debate on accountability during times of financial turbulence. Domestic laws governing loan defaults should cover provisions for incorporating the multinational nature of organisations and the presence of multinational banks and financial institutions in the domestic economy. Favourable treatment to certain countries can downgrade the investor friendliness of the host countries hampering future business and financial cooperation. Incorporating potential spillovers of domestic policies across countries would help ease political instability and economic sanctions. Financial diplomacy is hence key to economic and political stability (Garten, 1999).

Increased cooperation of international financial institutions like World Bank, International Monetary Fund and International Finance Corporation promotes synchronisation of polices and financial stability of domestic and international financial markets and economies. Regional financial development bodies like European Investment

Bank, African Development Bank, Asian Development Bank, Islamic Development Bank, CAF - Development Bank of Latin America should ascertain the educational and training requirements of member countries and recognize the viable and culturally accepted best practices that can be emulated by other members. Countries should convene regular meetings and coordinate their activities towards the common goal of domestic and global financial stability. Meetings of multinational forums like G20, G7, NAFTA, BRICS, EU, ASEAN, SAARC can help informal coordination of economic policies on friendly terms.

9. Highly Integrated Financial System

Losses associated with a failing financial entity gets dispersed and absorbed across entities in a highly integrated financial system reducing the counterparty risk and contagious failure of intuitions. Banks and financial institutions are thus robust to slight alterations to default probabilities during normal times. Information percolates across the system and risk is shared during normal times.

The downside to this integration is that information on credit quality and financial stability of intuitions are available at the disposal of other entities within the system making credit dear for defaulting institutions thus increasing their future default probability. During crisis periods, the interconnected network of financial system makes contagion rapid and widespread largely enhancing the default probability of entities through connectedness to other entities that defaults. Past robustness of financial system is no pointer for future robustness of the system. Financial systems in that respect exhibit a robust-yet-fragile tendency (Gai & Kapadia, 2010; Acemoglu, Ozdaglar, & Tahbaz-Salehi, 2015).

Identifying the underlying asset or debt of complex financial products is challenging. Balance sheets are interconnected in unknown ways. Consequently, the degree and extent of contagion cannot be ascertained in advance intensifying the losses due to a crisis as contagion gets intensified than expected. Modeling the impact of GFC without accounting for contagion effects between countries suffers from model misspecification. Contagion is any significant increase in asset return comovements across countries (Dungey & Gajurel, 2014) and this need not always be due to high levels of global integration. Contagion significantly reduces diversification benefits across assets and markets and can lead stable and unrelated markets to a state of panic and slowdown. The effect of contagion can be widespread and disastrous even when the probability of its occurrence is considerably low (Gai & Kapadia, 2010).

Model misspecification is yet another issue. Complex financial products come with several assumptions regarding model parameters, underlying distribution and model specification. These are based on the behaviour of data as captured from historical series and evidences. Model misspecification can have unbound consequences for institutions that hold a portfolio of highly leveraged financially engineered products that are marked-to-market on a daily basis (Markowitz, 2009). Thu, choosing the right model is of paramount importance to study financial stability risks (Adrian, Liang, & Natalucci, 2019) and crisis-induced contagion.

10. Over Reliance on Rating Agencies

Complex pricing and the volatility of the yield curve across products make it difficult for investors with limited knowledge of asset classes, credit risk; market outlook to make investment choices deemed optimum for their financial goals. Financial derivatives and other complex financial products are intricate by construction and beyond comprehension of amateur and retail investors. It is difficult for investors to understand the complex pricing of the financially engineered products in their portfolio let alone the type and quality of the mortgages underlying those assets (Helleiner, 2011). Ratings agencies come to play here by reducing information asymmetries and assisting investors to ascertain the credit worthiness of issuers (Prakash, Ayachit & Garg, 2017). They also aid regulators by reducing the cost of regulation of financial products (Rhee, 2015).

It was Moody's who started credit rating with rating rail bonds in 1900s (Prakash et.al., 2017). Credit rating agencies (CRAs) provide ratings that stand for the default probability of individual debt instruments and their debt issuers. CRAs dissuade investors from performing due diligence (De Pascalis, 2016) by self as investors relied heavily on product, company, sector and country ratings and outlook provided by CRAs to evaluate their portfolios. Mandates by governments' and regulatory bodies for institutional investors to abide by credit ratings also empower the role of CRAs. However, with the onset of the GFC and the ensuing sovereign debt crisis in Europe, serious questions were raised on the reliability, effectiveness and the need for CRAs. Rating agencies failed to alert the system of a probable crisis (Prakash et.al., 2017)until the debt instruments failed. Studies in the backdrop of GFC have found that CRAs inflated ratings (Babu, 2014) to be chosen as the preferred rating agency by the issuers. The humungous downgrading of highly rated mortgages post the GFC by main CRAs (De Pascalis, 2016) raised red flags on the role of CRAs in worsening the crisis (Babu, 2014) and the functioning of CRAs in general.

Banks and large financial institutions should be equipped to conduct in-house credit quality analysis. Strengthening the regulatory framework for supervision of credit issue and developing alternative tools to measure creditworthiness needs to be addressed. Regulators shall refrain from referring to credit scores by rating agencies as it provides misconceptions about legal backing for the credit ratings. CRAs that indulge in notching (the practise of downgrading issuers who chose other CRAs) must be penalised. An alternative to CRAs cannot be found instantaneously and is not required. What is required is the development of internal measures of creditworthiness that can complement the inputs from CRAs.

11. Conclusions

The GFC has brought to perspective the weaknesses of the global financial architecture and the need for prudent regulation. Financial crises are by-products of the evolution of financial products and increasingly intertwined financial networks. Hence, it is impossible to prevent financial crises. The global financial system is successful if we can reduce the impact, intensity and frequency of future crises (Garten, 1999). Global surveillance has been on the rise with the introduction of various forms of accountability as discussed in the paper. The question remains whether we are safer and better prepared for another crisis. The increasing household debt levels in countries like Canada, UK, Spain, Ireland, Malaysia, Thailand, China, South Korea and Australia in the past decade (Lund et al., 2018) does not say so.

Since this study is of theoretical nature, we have not carried out any empirical analysis. Some aspects of this paper cannot be easily empirically analysed such as the need for standardisation of default laws and the call to perceive CDS as insurance. This study tries to complement the on-going empirical work in this area by identifying insights from existing research and by pointing out issues that need attention. Therefore, future research can explore into the empirical examination of the various issues discussed in this paper. Further research and policy interventions are also needed in the following areas -effect of political lobbying on stability of financial system, enhancing transparency in construction and transactions in derivatives, financial deepening and openness, operationalization of automatic stabilisers, diversification of government reserves, and weakening channels of contagion.

References

Acemoglu, D., Ozdaglar, A., & Tahbaz-Salehi, A. (2015). Systemic risk and stability in financial networks. *American Economic Review, 105*(2), 564-608. https://doi.org/10.1257/aer.20130456

Adrian, T., He, D., Liang, N., & Natalucci, F. (2019). A Monitoring Framework for Global Financial Stability. *Journal Issue, 6*. https://doi.org/10.5089/9781498300339.006

Babu, R. R. (2014). *Rating Agencies*.

Cecchetti, S. G., & Schoenholtz, K. (2019). *Improving US Monetary Policy Communications*.

Cukierman, A. (2013). Monetary policy and institutions before, during, and after the global financial crisis. *Journal of Financial Stability, 9*(3), 373-384. https://doi.org/10.1016/j.jfs.2013.02.002

De Pascalis, F. (2016). Reducing regulatory reliance on credit ratings to address investors' over-reliance: some thoughts in light of the US experience. *Capital Markets Law Journal, 11*(4), 510-527. https://doi.org/10.1093/cmlj/kmw020

Dungey, M., & Gajurel, D. (2014). Equity market contagion during the global financial crisis: Evidence from the world's eight largest economies. *Economic Systems, 38*(2), 161-177. https://doi.org/10.1016/j.ecosys.2013.10.003

Gai, P., & Kapadia, S. (2010). Contagion in financial networks. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 466*(2120), 2401-2423. https://doi.org/10.1098/rspa.2009.0410

Garten, J. E. (1999). Lessons for the next financial crisis. *Foreign Aff., 78*, 76. https://doi.org/10.2307/20049210

Helleiner, E. (2011). Understanding the 2007-2008 global financial crisis: Lessons for scholars of international political economy. *Annual Review of Political Science, 14*, 67-87. https://doi.org/10.1146/annurev-polisci-050409-112539

Jordà, Ò., Schularick, M., & Taylor, A. M. (2013). When credit bites back. *Journal of Money, Credit and Banking, 45*(s2), 3-28. https://doi.org/10.1111/jmcb.12069

Kaminsky, G., Lizondo, S., & Reinhart, C. M. (1998). Leading indicators of currency crises. S*taff Papers, 45*(1), 1-48. https://doi.org/10.2307/3867328

Kliesen, K., Levine, B., & Waller, C. (2018). Gauging the Evolution of Monetary Policy Communication Before and After the Financial Crisis. *Economic Synopses, 27*. https://doi.org/10.20955/es.2018.27

Lee, S. H., & Makhija, M. (2009). Flexibility in internationalization: is it valuable during an economic crisis?. *Strategic Management Journal, 30*(5), 537-555. https://doi.org/10.1002/smj.742

Lin, S., Riccardi, W. N., Wang, C., Hopkins, P. E., & Kabureck, G. (2019). Relative effects of IFRS adoption and IFRS convergence on financial statement comparability. *Contemporary Accounting Research, 36*(2), 588-628. https://doi.org/10.1111/1911-3846.12475

Lombardi, D., Siklos, P. L., & Amanda, S. S. (2019). Asset Price Spillovers from Unconventional Monetary Policy: A Global Empirical Perspective. *International Journal of Central Banking.*

Lund, S., Manyika, J., Mehta, A., & Goldshtein, D. (2018, September). *A decade after the global financial crisis: What has (and hasn't) changed*. McKinsey&Company Briefing Note.

Lyrintzis, C. (2011). *Greek politics in the era of economic crisis: reassessing causes and effects.*

Markowitz, H. M. (2009). Proposals Concerning the Current Financial Crisis. *Financial Analysts Journal, 65*(1), 25-27. https://doi.org/10.2469/faj.v65.n1.4

Mbaye, S., Badia, M. M. M., & Chae, K. (2018). Global debt database: Methodology and sources. *International Monetary Fund.* https://doi.org/10.5089/9781484353592.001

Paul, P. (2019). Modeling Financial Crises. *FRBSF Economic Letter, 8*.

Prakash, S., Ayachit, A., & Garg, S. (2017). *Regulation of credit rating agencies in India* (pp. 1-5). Vidhi Centre for Legal Policy.

Rhee, R. J. (2015). Why credit rating agencies exist. *Economic Notes: Review of Banking, Finance and Monetary Economics, 44*(2), 161-176. https://doi.org/10.1111/ecno.12034

Sherman, M. (2009). *The Alphabet Soup Explained: An Analysis of the Special Lending Facilities at the Federal Reserve* (No. 2009-24). Center for Economic and Policy Research (CEPR).

Valencia, F., & Laeven, L. (2012). *Systemic Banking Crises Database: An Update (No. 12/163)*. International Monetary Fund. https://doi.org/10.5089/9781475505054.001

Wynne, M. A. (2013). A short history of FOMC communication. *Economic Letter, 8*.