THE GLOBAL FINANCIAL CRISIS (2007-10) IN THE BACKDROP OF GLOBAL FINANCIAL INTEGRATION: THE ROAD MAP OF RESTRUCTURING GLOBAL FINANCIAL REGULATORY SYSTEM

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(INTERDISCIPLINARY)

Submitted By

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UNDER THE GUIDANCE OF

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DECLARATION

I ***Thakkar Hiteshkumar Dharampal***, hereby declare that this Ph.D. thesis entitled "***The Global Financial Crisis (2007-10) in the backdrop of Global Financial Integration: The road map of restructuring Global Financial Regulatory System"*** was carried out by me in partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy in Economics and Law (Interdisciplinary) is a record of original and independent research work done by me during September 2011 to October 2016 under the supervision and guidance of Guide, **Dr. Ranita Nagar,** Professor of Economics, Gujarat National Law University, Gandhinagar and Co-Guide**, Dr. Udayakumara Ramakrishna B.N**, Assistant Professor of Law, Gujarat National Law University, Gandhinagar.

The Thesis has not been submitted partially or wholly for the award of any degree or diploma in any other university in India or abroad.

Place: Gandhinagar | Thakkar Hiteshkumar Dharampal

Date: 13 October 2016 | Ph.D. Scholar Reg.No GNLU/Ph.D./2011/010

Date: 13 October 2016

CERTIFICATE

This is to certify that the thesis entitled, "***The Global Financial Crisis (2007-10) in the backdrop of Global Financial Integration: The road map of restructuring Global Financial Regulatory System***" submitted to the Gujarat National Law University, in partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy in Economics and Law (Interdisciplinary) is a record of original research work done by ***Mr. Thakkar Hiteshkumar Dharampal*** during September 2011 to October 2016 of his study under our supervision and guidance.

We recommend that the thesis be placed before the examiners for their consideration for the award of Ph.D. Degree.

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Place: Gandhinagar **Thakkar Hiteshkumar Dharampal**

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ABBREVIATIONS

AFC	Asian Financial Crisis
ASEAN	Association of Southeast Asian Nations
CDO	Collateralized Debt Obligation
CDS	Credit Default Swap
CEECs	Central and Eastern European Countries
CGFS	The Committee on the Global Financial System
COS	Compendium of Standards
EC	Euro Crisis
ECB	European Central Bank
ECOSOC	The Economic and Social Council
EMEs	Emerging Market Economies
EU	European Union
FATF	Financial Action Task Force
FDI	Foreign Direct Investment
FO	Financial Openness
FPI	Foreign Portfolio Investment
FSA	Financial Sector Assessment
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSF	Financial Stability Forum
FSSA	Financial System Stability Assessment
GATT	General Agreement on Tariffs and Trade
GFC	Global Financial Crisis
GFI	Global Financial Integration
GFRS	Global Financial Regulatory System
GFSB	Global Financial Supervisory Bodies
IAASB	International Auditing and Assurance Standards Board
IADI	International Association of Deposit Insurers
IAIS	International Association of Insurance Supervisors
ICSID	International Centre for Settlement of Investment Disputes
IDA	International Development Association

IDS AM	International Debt Securities, all Maturities
IDS NB	International Debt Securitas, nonbanks
IFAC	International Federation of Accountants
IFC	International Finance Corporation
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ISA	International Standards on Auditing
ITO	International Trade Organization
LDCs	Least Developed Countries
MBS	Mortgage-Backed Security
MDBs	Multilateral Development Banks
MDGs	Millennium Development Goals
MEC	Marginal Efficiency Of Capital
MIGA	Multilateral Investment Guarantee Agency
MNCs	Multi-National Companies
NCJs	Non-Cooperative Jurisdictions
NIEO	New International Economic Order
OECD	Organization for Economic Co-operation and Development
OED	Operations Evaluation Department
PIIGS	Portugal, Italy, Ireland, Greece and Spain
ROSC	Reports of the Observance of Standards and Codes
SDRs	Special Drawing Rights
SIFI	Systemically Important Financial Institution
SSBs	Standard Setting Bodies
TLAC	Total Loss-Absorbing Capacity
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNGA	United Nation General Assembly
WFA	World Financial Authority
WFO	World Financial Organization
WTO	World Trade Organization

1. Introduction to

The Global Financial Crisis (2007-10) in the backdrop of Global Financial Integration: The road map of restructuring Global Financial Regulatory System

SCHEME OF THE CHAPTER

1. Introduction

1.1. Macro Framework of the Research Problem

1.1.1. Frame

Conceptualizing the origin and spread of Global financial crisis (GFC) in the backdrop of global financial integration (GFI). The extent to which the impact of GFI was present in previous major financial crises. Identification and explanation of market failure as a critical regulatory gap in the context of financial openness. The development of Global Financial Regulatory System (GFRS) is based on the progress of international financial integration. The evaluation of GFRS in the context of pre and post global financial crisis, and the changes that have been incorporated in GFRS during post global financial crisis. Measures taken to strengthen the coordination and cooperation between macro-prudential and micro-prudential regulators, in the condition of integrated global financial system.

1.1.2. Focus

The GFC emphasized structural bottlenecks in environments of financial openness. The role of the global financial regulatory system is gaining more importance because multiple countries are interacting with one another in the era of financial globalization. The GFRS policies focus on the area of global macroeconomics as a whole. Identification of a mechanism where the coordination of Micro-Prudential Regulators and Macro-Prudential Regulators is effective. The FSB is a first step towards this goal.

1.1.3. Objective

Restructuring the Global Financial Regulatory System, for safeguarding external shocks, in situations of Global Financial Integration.

1.2. Background Note

Global Economy has witnessed the most severe world financial crisis in the form of Global Financial Crisis (GFC). This market failure has raised questions, such as, what were the causes of the depression and why the effect of crisis spread worldwide and what regulatory steps are required for maintaining long-term sustainability in GFRS? Evidence suggests that the ***global financial integration*** has increased cross-border capital flow movement but in the absence of a streamlined international financial regulation. Financial inter-linkages have increased the length and breadth of the global financial system on one hand, while on the other, the financial fragility and vulnerability also have increased. The global financial crisis and the Euro crisis have questioned the existence of the ***global financial regulatory system***. The global financial regulatory system has been challenged on the grounds of stability and sustainability. In the post global financial crisis the entire focus shifted from Micro-Prudential Regulation to Macro-Prudential Regulation which led to the development of the new International ***Macro-Prudential Supervisior*** named as ***Financial Stability Board (FSB).*** Whereas the ***Micro-Prudential Supervision*** is monitored by International standard setting bodies (SSBs), international financial institutions (IMF and World Bank) and national financial regulators. The stability and sustainability of the global financial system are the mandates of International Macro Prudential Supervision as stated in Article 2 of the Charter of the Financial Stability Board. However, FSB does not create any legal rights or obligations towards member nations (Article 23, Charter of FSB). Though FSB is part of soft law, due to peer group pressure and international goodwill, the member nations are strictly implementing the recommendations or standards. The institutionalizing of FSB will increase economic efficiency and will incentivise non-FSB members to increase International financial integration.

The research is divided into five sections. The first section focuses on the comparative study of selected major financial crises (global financial crisis, Asian crisis, and Euro area crisis). The second section discusses details about the increasing impact of global financial integration as a major factor in major financial crises. The third and fourth section deal with reforms undertaken in global financial regulatory mechanism, in response to the pre and post Global financial crisis. The fifth section identifies challenges in the global financial regulatory system in specific context of global financial integration.

2. Definition of the terms used in the Thesis

2.1. Global Financial Crisis

2.1.1. “Parties to financial contracts in many countries, at the same time conclude that the contracts they hold are unlikely be honored by counterparties or that the financial assets that they hold are likely to be worth substantially less than previously thought.”[1] In addition, the concern financial institutions cease to advance funds. The customer typically demands repayment of deposits and advances before maturity period because of which loan and the trading volume fall substantially. The affected individual and financial institution request their repayment in terms of cash or gold and are not ready to accept securities as repayment. This leads to decrease in the price of financial assets. The crisis confronted individual financial institution or region specific institutions become contagious and spreads across the globe due to increase in cross-border financial linkages.[2]

2.1.2. “A wide range of financial assets such as stocks, government bonds, bank deposits, asset-backed securities and insurance contracts can be subject to simultaneous “loss of confidence”. It would be wrong, therefore, to associate global financial crises with deficiencies in any one type of financial counterparty, such as governments, or with sharp fall in the values of any one type of financial assets”.[3] Moreover, financial turmoil may also be driven by behavioral factors such contagion, herd-effect, spillovers, and asset price burst. Keynes’ notion of ‘animal spirit’ can explain the irrational behavior of stakeholders during the times market failure[4]. The phenomena where

[1]Financial Times lexicon, ‘Definition of global financial crisis’ <http://lexicon.ft.com/Term?term=global-financial-crisis> accessed 20-Feb-16.
[2] Ibid.
[3] Ibid.
[4] Hersh Shefrin and Meir Statman, ‘Behavioral Finance in the Financial Crisis : Market Efficiency, Minsky, and Keynes’ [2011] Santa Clara University , 22 <http://www.russellsage.org/sites/all/files/Rethinking-Finance/Shefrin%20Statman%2001272012.pdf> accessed 20-Feb-16.

financial assets and credit bubbles get inflated beyond rational level, finally, turn into a burst.[5]

2.2. Global Financial Integration

2.2.1. 'The GFI will hold the law of one price where all assets identify with risks and returns. Capital would flow from the low return to high return country and in this process, risk is adjusted as per expected rates of return, which tend to equalize across the countries. In this framework the stakeholders face a uniform set of rules and regulation, have equal access and are treated equally with regard to finance.' GFI is also refer as financial openness, capital account convertifibility, globalziation of finance or liberalizaton of captial accout.

2.2.2. Financial integration has harmonized financial instruments with the rest of the world. The development of the financially integrated system began by opening a country's financial institutions to the foreign participants as well as promoting local players to invest overseas.[6] The national stakeholders are not only dependent on their own financial sector, but also can borrow from the global financial market; borrowing depends on capital account liberalization. The core principle of GFI is portfolio diversification, risk-sharing, and allocation of capital efficiently.

2.3. Global Financial Regulatory System

2.3.1. An interaction of international financial institutions (IFIs), micro-prudential regulators, macro-prudential regulators, countries financial authorities, and multi-national companies (MNCs) which provide guidelines and norms to maintain stability and sustainability in supranational operation. In Global Financial Regulatory System (GFRS), there is official understandings, agreements, conventions, and institutions as

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[5] Stijn Claessens and M. Ayhan Kose, 'Financial Crises: Explanations, Types, and Implications' (2013) WP/13/28 IMF Working Paper, 6 <https://www.imf.org/external/pubs/ft/wp/2013/wp1328.pdf> accessed 20-Feb-16.

[6] Alicia García-Herrero and Philip Wooldridge, 'Global and Regional Financial Integration: Progress in Emerging Markets' (September 2007) BIS Quarterly Review, 59-60 <http://www.bis.org/publ/qtrpdf/r_qt0709g.pdf> accessed 01-Mar-16.

well as the private and official processes, institutions, and conventions associated with private and public financial activities.[7]

2.3.2. The GFRS is the combination of Micro-Prudential Regulators' and Macro-Prudential Regulators' acting at Supranational level.

2.4. Micro-Prudential Regulation:

Micro-prudential regulation[8] examines the responses of an individual financial sector to exogenous risks. It does not incorporate the systemic implications of common behavior.[9]

2.4.1. Micro-Prudential Regulators :

Micro-Prudential Regulators in GFRS comprises of Standard Setting Bodies - SSBs (i.e., the Basel Committee on Banking Supervision, Committee on Payment and Settlement Systems, International Association of Insurance Supervisors, International Financial Reporting Standards, and International Organization of Securities Commissions, the Committee on the Global Financial System), International Financial Institutions (Bank for International Settlements, International Monetary Fund, Organization for Economic Cooperation and Development and World Bank), Financial authorities of represented countries, the G-20 countries' regulatory and supervisory authorities (central banks, finance ministries or financial sector regulators), and the European Central Bank.

[7] Garry J. Schinasi and Edwin M. Truman, 'Reform of the Global Financial Architecture' [2010] Bruegel and the Peterson Institute for International Economics W P 10 - 14 , 3 <https://www.piie.com/publications/interstitial.cfm?ResearchID=1674> accessed 18-Mar-16.

[8] Micro-prudential regulation consisting of such measures as the certification of those working in the financial sector; rules on what assets can be held by whom; how instruments are listed, traded, sold and reported; and measures of the value and riskiness of assets concerns itself with the stability of individual entities and the protection of clients of the institutions.

[9] The University of Warwick and CIGI, 'The Warwick Commission on International Financial Reform: In Praise of Unlevel Playing Fields' (The University of Warwick 2009). Ch 2 Macro-Prudential and Micro-Prudential Regulation, 12 <https://www2.warwick.ac.uk/research/warwickcommission/financialreform/report/> accessed 17 January 2016.

2.5. Macro-prudential Regulation :

Macro-prudential approach to regulation considers the systemic implications of the collective behaviour of financial sectors. A critical feature of macro-prudence and systemic stability is the heterogeneity of the financial system where homogenous behaviours are undermined by the system. In this regard, systemic risk is endogenous and macroprudential regulation is about identifying those endogenous processes that turn heterogeneity into homogeneity and make the financial system more fragile.[10]

2.5.1. Macro-Prudential Regulators

Macro-Prudential Regulators in GFRS is represented by Financial Stability Board (FSB) and International Monetary Fund (IMF).

3. Objectives

The global financial regulatory system has evolved and developed as and when faced with challenges. The global financial crisis was an opportunity to global policy makers to redesign GFRS in the context of global financial integration. In line of these facts, the research objectives are as follow:

- To provide logical reasoning and conceptual understanding of global financial crisis in relation to global financial integration;
- To compare global financial crisis with previous major financial crises;
- To provide framework for coordination and cooperation between macro-prudential regulation and micro-prudential regulation to streamline to attend better synergy;
- To provide structure for streamlining the task of FSB and IMF as a Macro-Prudential regulator;
- To institutionalize global financial regulatory system;
- To develop FSB on lines of World Financial Organization/ World Financial Authority

[10] Ibid.13.

4. Research Questions

- What were the causes of the Global Financial Crisis?
- What are the similarities and differences between Global Financial Crisis with other major crises?
- What are the indicators of an increase in Global Financial Integration (GFI)?
- What is the impact of global financial integration on the global financial crisis?
- What was the structure of global financial regulatory mechanism at the time of pre-crisis period?
- What structural changes have occurred in the global financial regulatory system in post-crisis period?
- Whether the current International Micro and Macro-Prudential supervision are adequate in the context of GFI?
- Whether there is a requirement of the restructuring of the Global financial regulatory system in the context of Global financial integration?
- What are the unresolved challenges that need to be addressed in the GFRS?
- What steps have been taken for the next stage of reforms in the GFRS?

5. Hypotheses

1. There is a distinct economic pattern that eventually leads to an economic crisis, having quantifiable similarities.
2. In the backdrop of global financial integration there is need for strong global financial regulatory mechanism.

6. Scope

The global financial crisis, global financial integration, and global financial regulatory system are three different specialized areas. The research attempts to draw upon all the three areas collectively to explain the global financial crisis and think through to possible solutions. The research relies on secondary source for data interpretation and analysis. Therefore, the study relies on existing literature. However, the research provides an opportunity to introspect global financial crisis in the context of integration and discuss the adequacy/inadequacy of global financial regulations.

7. Research Methodology/Design

This study is based on doctrinal research. The research method is the combination of analytical, critical or conceptual in nature. The design of research has been detailed in three sections. First section (7.1) provides research framework to explain the distinct economic patterns identified in previous major economic crises. In the second section (7.2), the conceptual and theoretical method has been used to interpret the role of global financial integration in financial crises. Third setion (7.3) describes the restructuring of global financial regulatory system in the background of global financial integration where analytical and critical method has been applied for evaluating development of the rules and regulation.

7.1. Global Financial crisis, Asian Financial Crisis and Euro Crisis:

Comparative method has been applied to three sample major economic crises such as Global Financial Crisis, Asian Financial Crisis, and Euro Crisis to identify quantifiable similarities in the backdrop of Global Financial Integration. The analytical method and critical method have also been used to strengthen facts and evidence.

7.1.1. Data: The secondary data has been taken from World Bank databank and the same has been compiled, interpreted and analyzed based on the research question and hypothesis.

7.1.2. Sample Regions:

1. Central Europe and the Baltics
2. Europe & Central Asia (developing only)
3. East Asia & Pacific (developing only)
4. Latin America & Caribbean (developing only)

5. Sub-Saharan Africa (developing only)
6. North America
7. Middle East & North Africa (developing only)
8. South Asia
9. World
10. Caribbean small states
11. Euro area
12. Arab World

7.1.3. Time Interval:

1. T-2, T, and T+2: 1995 to 2000 (AFC)
2. T-3, T and T+3: 2004 to 2011 (GFC and EC)

7.1.4. List of Variables:

1. GDP growth (annual %)
2. Exports of goods and services (annual % growth)
3. Imports of goods and services (annual % growth)
4. Inflation, consumer prices (annual %)
5. Portfolio equity, net inflows (BoP, current US$)
6. Unemployment, total (% of total labor force)
7. Foreign direct investment, net inflows (BoP, current US$)
8. Final consumption expenditure, etc. (annual % growth)
9. Trade (% of GDP)
10. Stock market capitalization to GDP (%)
11. Stock price volatility
12. Current account balance (current US$)
13. Merchandise exports (current US$)
14. Merchandise imports (current US$)

7.2. The role of Global Financial Integration in Financial Crises

The conceptual and theoretical method has been applied to explain the role of global financial integration in financial crises. The secondary data has been taken from Joint BIS-IMF-OECD-World Bank External Debt Hub (JEDH) Databank and the same has been put through the stages of compilation, classification, interpretation, analysis, and finally conclusion and inferences. Analytical and critical method have also been used to strengthen facts and evidence.

7.2.1. Sample Countries:

Emerging Countries – India, China, Brazil, Indonesia, South Africa
Developed Countries – USA, UK, Japan, Germany, France
Time Interval: 1995 to 2004 and 2004 to 2013

7.2.2. List of Variables:

1. Cross Border Loans from BIS reporting Banks:
2. Cross-border loans from BIS banks to non-banks: (CBL NB)
3. SDR Allocation:
4. Liabilities to BIS (Cons.), short term
5. International Debt Securities, all Maturities
6. International Debt Securitas, nonbanks
7. International Debt securities, short term
8. International Debt Securities, Nonbanks, short term
9. Debt Securities held by non-residents
10. Liabilities to BIS banks, locational, total
11. Liabilities to BIS banks, Consolidated, total
12. International Reserve (Excluding God)
13. SDR holdings
14. Portfolio Investment Assets
15. Cross-border deposits with BIS rep. Banks
16. Cross-border deposit with BIS banks, nonbanks

Source: Joint External Debt Hub**:** World Bank, IMF, BIS, and OECD together jointly work on International Debt Statistic

7.3. Restructuring of Global Financial Regulatory System:

The formulation of restructuring of global financial regulatory system is based on logical elucidation and exploration of rules and regulation in the current context. In the areas of regulatory gap and forecasting future development, the analytical and critical approach has been applied.

The study relies on Primary sources of Macro-Prudential Regulators and Micro-Prudential Regulators, including the institutions Charter, Convention, Treaty, or Agreement as follows:

7.3.1. Micro-Prudential Regulators : The Basel Committee on Banking Supervision, Committee on Payment and Settlement Systems, International Association of Insurance Supervisors, International Financial Reporting Standards, and International Organization of Securities Commissions, the Committee on the Global Financial System, International Financial Institutions (Bank for International Settlements, International Monetary Fund, Organization for Economic Cooperation and Development, and World Bank), Financial authorities of represented countries, the G-20 countries' regulatory and supervisory authorities (central banks, finance ministries or financial sector regulators), and the European Central Bank.

7.3.2. Marco-Prudential Regulators: Financial Stability Board (FSB) and International Monetary Fund (IMF).

Secondary literature has been referred such as various surveys, books, journals, and articles from the library as well from the internet sources. This includes major national and international reports, both of the developed and developing economy, based on research questions. In addition, basic statistics has also been used.

8. Significance of Study

The research focuses on the understanding of Global Financial Crisis (GFC) in the contemporary context of Global Financial Integration (GFI). In order to appreciate the extent of the impact of GFI on GFC, the GFC has been compared with the other major economic crisis. GFI identify a new set of regulatory gaps in the global finance which were addressed by Micro Prudential and Macro Prudential regulations, in varying measures, from time to time. The GFC proved the failure of the existing financial regulatory framework and this research postulates the improvements needed, such that the new evolved GFRS can effectively address any future crises. The research is a distinct interdisciplinary study, identifying the cause of financial crisis in the contemporary context of GFI and suggests the evolving of a sound international financial regulation framework, to minimize the systematic risk in global financial markets. This research travels the path from cause to effect and to its possible solution.

9. Structure of Chapters

Chapter 1: Introduction

The chapter introduces the title of the research problem “The global financial crisis (2007-10) in the backdrop of global financial integration: The road map of the restructuring of global financial regulatory system”. The chapter outlines the macro framework of the research problem where background note, objectives, research questions, hypothesis, scope, and research methodology/design have been framed, based on the statement of the problem.

Chapter 2: Literature Review

The Literature Review focuses on various important studies on Global financial crisis (GFC), Global Financial Integration (GFI), and Global Financial Regulatory System (GFRS) by several research scholars. The literature review reveals that there is no research on the interface of GFC, GFI and GFRS. Further, this interface is necessarily interdisciplinary in nature to arrive at workable solution with regard to financial crisis.

Chapter 3: Global Financial Crisis (GFC), Asian Financial Crisis (ASC) and Euro Crisis (EC) in the backdrop of Global Financial Integration

The Chapter provides a framework for the conceptual understanding, types, and origin of the financial crisis. It focuses on the comparative study of global financial crisis with Euro Crisis and Asian Financial Crisis in the backdrop of global financial integration. Data analysis of portfolio investment (equity) and foreign direct investment (net inflow) have been used to signify their pattern and trend during major economic crisis.

Chapter 4: Global Financial Integration

The chapter constructs a theoretical framework to discuss impact and the emerging challenges of GFI. It also analysis data of foreign assets and foreign liabilities for sample emerging countries and developed countries during the time intervals of major economic crisis.

Chapter 5: Restructuring the Global Financial Regulatory System in the conditions of Global Financial Integration: Pre Global Financial Crisis

The chapter introduces the global financial regulatory system and its jurisprudence. It discusses in detail the evolution and development of global financial regulatory system during pre-global financial crisis where micro-prudential regulators such as World Bank Group, WTO, UN, BIS, the Basel Committee on banking supervision, the committee on payment and settlements, the committee on the global financial system, IADI, IFRS, IOSCO, IAIS, IFAC, and OECD and macro-prudential regulators such as IMF and FSB have been discussed. It also provides evidence of an increase of global financial integration in the absence of prerequisite global financial regulation.

Chapter 6: Restructuring the Global Financial Regulatory System in the conditions of Global Financial Integration: Post Global Financial Crisis

The chapter provides facts and evidence of the restructuring of global financial regulatory system after the global financial crisis explaining the emergence of Financial

Stability Board (FSB) and the reforms in IMF. It also covers the role, function and structure of FSB along with a comparison of FSB with IMF as macro-prudential regulators. It traces the development from the first G20 summit 2008 to ninth G20 summit 2014 and provides the details of restructuring in GFRS.

Chapter 7: Challenges and Reforms in the GFRS

The chapter discusses the issues and challenges of GFRS in the context of micro and macro prudential regulation. It explores the alternative solution of a World Financial Organization / Supra Global Financial Regulator by replacing existing soft law with hard law. It also provides quantifiable facts in support of the restructuring of GFRS in G20 jurisdictions and non-G20 jurisdictions.

Chapter 8: Data Analysis and Data Interpretation: Quantifiable similarities of Economic Crisis

The chapter provides evidence based on the data analysis and data interpretation illustrating that there is a distinct economic pattern that eventually leads to an economic crisis, having quantifiable similarities.

Chapter 9: Conclusions and Suggestions

The concluding chapter provides the outcome of this research by addressing research questions and evaluating the result of the hypothesis. It provides concrete suggestions for achieving the next stage of restructuring in GFRS.

2. Review of Literature

The literature review on crisis and global financial integration (GFI) suggests that the international financial inter-linkage has broadened and widened the scale of financial openness in developed economies, developing economies and few LDCs from 1990's onwards. However, during times of external shock, the negative herd-effect also spread to financially interdependent countries. The GFI failed to fulfill the pre-requisite regulatory requirement, which resulted in a currency crisis and became contagious from one country to another country. Eichengreen, Rose, and Wyploszv (1996)[1] have used thirty four years of panel data (1959 to 1993) from 20 industrial countries and stated that the external fiasco has spread quickly in closely financial inter-linked countries. The study of Calvo, Izquierdo, and Mejía (2008)[2] have taken a sample of 110 advanced and emerging countries, for the period of 1990-2004 and their research outcome stated that the unexpected volatility in capital flows led to a sudden stop which occurred due to balance sheet problem. Therefore, the financial vulnerabilities and external shocks should be carefully considered with the spread of GFI, in the context of global financial system.

The research work of Buch, Carstensen, and Schertler (2005)[3] revealed that foreign assets of commercial banks were responsive to macroeconomic shocks in a systemic way. The study was based on an open economy model with incomplete financial integration. The study revealed that the international borrowing and lending of foreign assets increased at the time of monetary shocks and contracted at the time of expansionary fiscal shocks and the volume of the market depended upon transaction cost of international banking markets.

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[1] Barry Eichengreen, Andrew K. Rose, and Charles Wyplosz, 'Contagious Currency Crises' [1996] National Bureau of Economic Research, Working Paper 5681 , 35 <http://www.nber.org/papers/w5681.pdf> accessed 25-Feb-16.

[2] Guillermo A. Calvo, Alejandro Izquierdo, and Luis-Fernando Mejía, 'Systemic Sudden Stops: The Relevance Of Balance-Sheet Effects And Financial Integration' [2008] National Bureau of Economic Research, Working Paper No 14026 , 1.

[3] Claudia M Buch, Kai Carstensen, and Andrea Schertler, 'Macroeconomic Shocks and Foreign Bank Assets' [2005] Kiel Institute for World Economics, Kiel Working Paper No 1254 , 2 <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.600.9098&rep=rep1&type=pdf> accessed 25-Feb-16.

Hernandez, Mellado, and Valdes (2001)[4] provide empirical evidence that contagion was significantly high during the 1990s' compared to the earlier crises, and one of the reason was stronger financial integration in the 1990s.

Herrmann and Mihaljek's (2010)[5] study showed that the cross-border bank flows and its spill-overs effect led to the financial crisis. The research was based on gravity model and examined panel data set on cross-border bank flows of 17 developed countries and 28 developing countries of Asia, Latin America and Central and Eastern Europe (CEE), from 1993 to 2008. It was evident that the greater global risk aversion and unexpected financial market volatility were the most important factors behind the decrease in cross-border bank flows, during the crisis of 2007-08. The study also revealed that the decline in cross-border loans to CEE was limited as compared to Asia and Latin America. Papaioannou's (2009)[6] study on 'What drives International financial flows?" illustrated the determinants of global financial flows in large panel countries and explained the paradox of capital flow movement from rich to poor countries. This study gives an insightful framework for global financial integration. Claessens, Dell'Ariccia, Igan and Laeven's (2010)[7] study stated that the global financial crisis displayed common characteristics with previous crisis, specifically the features of global financial interlink-age, asset-credit bubble, and current account deficit.

Chen and Quang (2012)[8] research suggest that there is a direct relationship between international financial integration (IFI) and countries' economic growth. Whereas other research studies also reveal that the nations with greater financial openness displayed a

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[4] Leonardo Hernandez, Pamela Mellado and Rodrigo Valdes, 'Determinants of Private Capital Flows in the 1970s and 1990s: Is There Evidence of Contagion? - WP/01/64' [2001] IMF Working Paper WP/01/64 , 3 <https://www.imf.org/external/pubs/ft/wp/2001/wp0164.pdf> accessed 25-Feb-16.

[5] Sabine Herrmann and Dubravko Mihaljek, 'The determinants of cross-border bank flows to emerging markets: new empirical evidence on the spread of financial crises' (2010) Monetary and Economic Department, BIS Working Papers No 315 , 22 <http://www.bis.org/publ/work315.htm> accessed 25-Feb-16

[6] Elias Papaioannou, 'What drives international financial flows?: Politics, institutions and other determinants' (2009) 88(2) Journal of Development Economics , 269.

[7] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (2010) 25(62) Economic Policy , 277 <http://www.jstor.org/stable/pdf/40603207.pdf?acceptTC=true> accessed 24-Feb-16.

[8] Jinzhao Chen and Therese Quang, 'International Financial Integration and Economic Growth: New Evidence on Threshold Effects' [2012] Working Paper No 2012 – 30, Paris School of Economics , 1 <https://hal.archives-ouvertes.fr/halshs-00710139/document> accessed 25-Feb-16.

higher probability of having a crisis (M. Ayhan Kose and others, 2006).[9] The transmission of global financial crisis highly depends on capital account liberalization as shown by Lane and Milesi-Ferretti (2010).[10] The research undertaken by Kaminsky & Reinhart (2000)[11] revealed that the global financial epidemic was routed through the channel of cross-border banking operation.

Global financial integration, *per se,* is not a cause for financial crisis, rather the short-term capital flows, which are intrinsically volatile can be the reason of financial turmoil (Chuhan, Perez-Quiros and Popper, 1996).[12] Studies also show that the integration of global finance has enhanced the quality for accessing financial services (Caprio and Honohan, 2000)[13] and thus, the financial openness in isolation is not wrong. The associated problem of structural inefficiency in GFI can be addressed through institutionalization of financial openness, with an enhanced global financial regulatory mechanism (Underhill and Blom, 2013).[14]

In the process of Financial integration, the risk-adjusted expected rates of return tend to equalize across countries. This implies that law of one price would prevail in the integrated financial system.[15] The global and regional financial integration has facilitated the diversification of individual countries' risk (Underhill and Blom, 2013).[16]

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[9] M. Ayhan Kose and others, 'Financial Globalization: A Reappraisal' [2006] IMF Working Paper WP/06/189 , 21 <http://www.brookings.edu/~/media/research/files/papers/2006/8/globaleconomics-rogoff/20060823.pdf> accessed 25-Feb-16.
[10] Philip R. Lane and Gian Maria Milesi-Ferretti, 'The Cross-Country Incidence of the Global Crisis' [2010] IMF Working Paper WP/10/171 , 3 <https://www.imf.org/external/pubs/ft/wp/2010/wp10171.pdf> accessed 25-Feb-16.
[11] Graciela L Kaminsky and Carmen M Reinhart, 'On crises, contagion, and confusion' (2000) 51(1) Journal of International Economics , 145.
[12] Punam Chuhan, Gabriel Perez-Quiros, and Helen Popper, 'International capital flows: do short-term investment and direct investment differ?' [1996] The World Bank Policy Research Working Paper Series, No 1669 , 1.
[13] Gerard Caprio and Patrick Honohan, 'Restoring Banking Stability: Beyond Supervised Capital Requirements' (2000) 68(1) The South African Journal of Economics , 5.
[14] Geoffrey Underhill and Jasper Blom, 'Global Financial Integration, Twin Crises, and the Enduring Search for Financial Stability' [2013] Centre for Economic Policy Research , 20 <http://www.voxeu.org/sites/default/files/file/GlobalFinancialIntegration.pdf> accessed 06-Mar-16.
[15] Alicia García-Herrero and Philip Wooldridge, 'Global and Regional Financial Integration: Progress in Emerging Markets' (September 2007). BIS Quarterly Review <http://www.bis.org/publ/qtrpdf/r_qt0709g.pdf> accessed 01-Mar-16.
[16] Geoffrey Underhill and Jasper Blom (n 14) 64.

Research studies have suggested that the lack of formal channels to coordinate domestic regulation with international standards need to be addressed. This eventually resulted into the development of legally nonbinding best practices or standard code in the global financial system (see, Barth, Gan, and Nolle, 2005[17] and also refer, Alexander, 2009[18]). The United Nations Monetary and Financial Conference, Bretton Woods (1944) was the first step towards streamlining the global financial regulatory system for long-term stability and sustainability (Art I Purpose, Articles of Agreement IMF and IBRD).[19] In 1974, major international banks of three nations faced bankruptcy and West German's Herstatt Bankhaus,[20] Britain's British-Israel Bank of London and the Franklin National Bank in the US were shut down. This banking crisis revealed a regulatory gap in the banking sector. This inadequate standard was addressed through Basel Committee on Banking Supervision or Basel Committee in 1974.[21] The Basel Committee board mandates were to develop and update existing norms. In the background of the collapse of the Italian bank Banco Ambrosiano, the Basel Committee amended Concordat in 1983.[22] Based on the failure of Bank of Credit and Commerce International (BCCI) scandal in 1991, the Basel Committee in 1992 developed its report on a minimum standard for the regulation of cross-border dynamics.[23] The Basel Committee has upgraded the banking standard based on specific requirements starting from Basel-I to the recent Basel-III accord.[24]

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[17] James R. Barth, Jie Gan, and Daniel E. Nolle, 'Global Banking Regulation and Supervision' in E. Klein (ed), *Global banking issues* (Nova Science Publishers 2005) 42.

[18] Kern Alexander, 'Global Financial Standard Setting, the G10 Committees, and International Economic Law' (2009) 34(3) Brooklyn Journal of International Law , 870 <http://brooklynworks.brooklaw.edu/bjil/vol34/iss3/9> accessed 06-Mar-16.

[19] Articles of Agreement IMF and IBRD (United Nations Monetary and Financial Conference, 1944) Article I Purpose, 51-52 <http://siteresources.worldbank.org/EXTARCHIVES/Resources/IBRD_Articles_of_Agreement.pdf> accessed 22 January 2016.

[20] Kern Alexander, 'Global Financial Standard Setting, the G10 Committees, and International Economic Law' (n 18) 870.

[21] BIS, 'History of the Basel Committee' (1 October 2015) <http://www.bis.org/bcbs/history.htm> accessed 27 January 2016.

[22] Eilís Ferran and Charles Albert Eric Goodhart, *Regulating Financial Services and Markets in the Twenty First Century* (Hart 2001) 281

[23] Raj Bhala, 'Tragedy, Irony, and Protectionism after BCCI: A Three-Act Play Starring Maharajah Bank' [1994] Faculty Publications, Paper 847 <http://scholarship.law.wm.edu/facpubs/847> accessed 06-Mar-16

[24] Nadia A Al-Anani, 'Evaluation of the impact of international standards set "the Basel committee on banking supervision" on Jordanian law' (D Phil Thesis, Durham Law School 2009) 70.

The International financial system has grown gradually where the interdependence has increased in access to finance. The global liquidity has been transmitted across the world (BIS, 2011)[25] and the global arrangement of saving-investment equilibrium has significantly increased."[26]

Research have shown positive correlation between economic growth and financing,[27] however, the financing of households and corporations, beyond the sustainable level has resulted in negative consequences for global finance (Levine, 2004).[28]

The complexity of the financial sector has created regulatory challenges in the face of the fact that[29] the financial markets have changed dramatically through a process of liberalization, internationalization and globalization. These deficiencies of 'international financial architecture' were highlighted by the Mexican, Asian and other financial crises. In the face of these developments a serious concern was identified to reform the existing international institutional arrangements (Weber, 2001).[30]

In the context of GFC, no major economy was spared from its impact because the international financial system had become interconnected in a way such that systemic risk had become a real concern (Thakkar and Nagar, 2014).[31] The intensity of GFC increased in 2008 with the failure of the Lehman Brothers. The impact of this crisis intensely spread from one nation to other systematically important regions, and finally became contagious worldwide (Arner and Buckley, 2010)[32]. Even the financial superpowers failed and its

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[25] BIS (n 21).
[26] Maurice Obstfeld, 'Does the Current Account Still Matter' (2012) 102(3) American Economic Review ,1
[27] Stephen G. Cecchetti and Enisse Kharroubi, 'Reassessing the impact of finance on growth' [2012] Bank for International Settlements working paper number 381.
[28] Ross Levine, 'Finance and Growth: Theory and Evidence' [2004] National Bureau of Economic Research NBER Working Paper No 10766 , 1 <http://www.nber.org/papers/w10766.pdf> accessed 07-Mar-16
[29] Lorenzo Bini Smaghi, 'Has the financial sector grown too big?' (5 April 2010). Member of the Executive Board of the ECB Nomura Seminar, The paradigm shift after the financial crisis.
[30] Rolf H. Weber, 'Challenges for the New Financial Architecture' (2001) 31(2) Hong Kong Law Journal , 241 <http://ssrn.com/abstract=926662> accessed 12-Feb-16.
[31] Hitesh Thakkar and Ranita Nagar, 'The Global Financial Crisis in backdrop of major economic crises : The role of Global Financial Integration' in Taufeeque Ahmad Siddiqui, and S. Veeramani (ed), *Dynamics of international finance in Global South* (First impression. Excel India Publishers 2014) 326
[32] Douglas W Arner and Ross P Buckley, 'Redesigning the Architecture of the Global Financial System' (2010) 11(2) Melbourne Journal of International Law , 2.

failure adversely impacted all interdependent countries, as was experienced in the global financial crisis.[33] With regard to regional crisis, the strong ripple effects of the collapse of the Mexican economy were not restricted to Latin America, but spread throughout the developing world and also impacted some of the weaker developed economies.

The global financial regulatory mechanism was driven by micro-prudential regulation. The global financial crisis challenged the micro-prudential regulation and revealed that it was ineffective without a parallel robust macro-prudential regulatory framework. The macro-prudential regulators like FSB and IMF under took the mandates to address systemic risk in the global financial system as a whole (Baker, 2010).[34] The GFRS needs more time for experimentation with gradual implementation of international standards and its effectiveness vary in accordance with different financial setups.[35] The notion of a Supra global financial regulator is replacing the working of international soft law. A number of renowned economists have suggested names for this supra global financial regulator such as World Financial Organization (WFO) or World Financial Authority (WFA) (Kern Alexander and others, 2014)[36], though skepticism to the idea of a World Financial Organization (WFO) is found in Denters (2009) [37] who states that the creation of a WFO looks far-fetched from the current existing reality.

Global economic governance mehanisms such as micro and macro prudential regulators are not separate legal entities and their creation is not subject to a state enactment. They are an informal association of professionals and representatives of various states. Therefore, the regulatory stantards that evloved are non-binding in a legal sense but are important because there are seen as a standard of efficiency in the financial sector and

[33] Hitesh Thakkar and Ranita Nagar, 'The Global Financial Crisis in backdrop of major economic crises : The role of Global Financial Integration' (n 32)340.

[34] Andrew Baker, 'Mandate, Accountability and Decision Making Issues to be faced by the FSB' in Stephany Griffith-Jones, Eric Helleiner and Ngaire Woods (ed), *Special Report - The Financial Stability Board: An Effective Fourth Pillar of Global Economic Governance?* (CIGI 2010).

[35] Kern Alexander, 'Global Financial Regulation: Recent Developments' [2010] UNCTAD Experts Meeting , 8 <http://unctad.org/sections/wcmu/docs/cIme3_2nd_ALEXANDER_en.pdf> accessed 12-Feb-16.

[36] Alexander and others, 'The legitimacy of the G20 – a critique under international law' [2014] , 19 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2431164> accessed 12-Feb-16.

[37] Erik Denters, 'Regulation and Supervision of The Global Financial System: A Proposal for Institutional Reform' (2009) 1(3) Amsterdam Law Forum 63 <http://amsterdamlawforum.org/article/download/84/136> accessed 13-Feb-16.

provide an incentive for compliance in the global financial system. The validity of the global financial regulation is subject to the international legal norm where principles of legitimacy will always be challengeable in the regime of international financial soft law. [38] The lack of a binding form may reduce the options for enforcement in the short term. However, this does not deny that there can exist sincere and deeply held expectations of compliance with the norms contained in the non-binding form.[39] The government always acts within its powers, follows the appropriate procedures and provides equality of access to courts and other machinery for adjudication.[40] The legal system addresses the principles of good governance, according to the law, that includes openness, fairness, participation, accountability, consistency, rationality, accessibility of judicial and non-judicial grievance procedures, legality and impartiality (Mark Aronson and Matthew Groves, 2004) [41].

Global Financial Integration has outpaced the development of the appropriate political institutions and arrangements for effective governance of the global financial system. Global financial regulation must be designed in such a way that it enhances meaningful innovation that improves risk management and capital allocation (Thakkar and Nagar, 2012)[42]. Moreover, history speaks in volumes that every crisis has turned into the opportunity of giving shape to the global financial regulatory system (Nagar, Thakkar, and Pandya, 2013)[43]. The study undertaken by Davis and Green (2008)[44] show that fundamental changes are needed in global financial regulation, at par with the dynamic changes in present day global finance.

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[38] Alexander and others (n 36) 7.

[39] Dinah L. Shelton, 'Soft Law: Handbook of International Law' [2008] Routledge Press, GWU Legal Studies Research Paper No 322 & GWU Law School Public Law Research Paper No 322 , 21 <http://ssrn.com/abstract=1003387> accessed 12-Feb-16.

[40] Carol Harlow, 'Global Administrative Law: The Quest for Principles and Values' (2006) 17(1) European Journal of International Law , 195.

[41] Mark Aronson and Matthew Groves, *Judicial review of administrative action* (3th ed. Thomson Reuters 2004)1.

[42] Hitesh Thakkar and Ranita Nagar, 'Regulatory reform in Global Economic System' in Dr Sunil Karve (ed), *Management Issues & Options* (1st edn. Martha Mandir's 2012) 21.

[43] Ranita Nagar, Hitesh Thakkar and Param Pandya, 'The recent ecnomic crisis : Unleashing the creative economic revolution and the paradigm shift towards a New Economic Order' in Krishn A Goyal and Amiya K Mohapatra (ed), *Recent advances in management* (Prateeksha Publications 2013) 188.

[44] Howard Davies and David Green, *Global financial regulation: The essential guide/ Howard Davies and David Green* (Polity 2008) 262.

The research focuses on the understanding of GFC, GFI and GFRS. Specifically, the study understands the GFC in the contemporary context of GFI. In order to appreciate the extent of the impact of GFI on GFC, the GFC has been compared with the other major economic crisis. GFI gave the financial world a new set of regulatory gaps which were addressed by Micro Prudential and Macro Prudential regulations, in varying measures, from time to time. The GFC proved the failure of the existing financial regulatory framework and this research postulates the improvement needed, such that, the new evolved GFRS can effectively address any future crises. The research is a distinct interdisciplinary study, identifying the cause of financial crisis in the contemporary context of GFI and suggests the evolving of a sound international financial regulation to minimize the volatility in future financial market. This research travels the path from cause to effect and to its possible solution.

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Stephen G. Cecchetti and Enisse Kharroubi, 'Reassessing the impact of finance on growth' [2012] Bank for International Settlements working paper number 381.

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3. Global Financial Crisis (GFC), Asian Financial Crisis (AFC) and Euro Crisis (EC) in the backdrop of Global Financial Integration

SCHEME OF THE CHAPTER

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1.2 Kinds of Financial Crisis
1.2.1 Currency Crisis / Sudden Stop
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6.4. Foreign Direct Investment, net inflow (Regions)
6.5. Foreign Direct Investment, net inflow and Portfolio Investment, Equity (Regions based on Income)
6.6. Foreign Direct Investment, Net Inflows in reporting Economy (Percentage Change)
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Annexure: 3.1.

1. Background Note

The global financial market failure is not a new phenomenon, and the worst of this failure has been witnessed in the 2008 global financial crisis. This research study focuses on the extent to which GFI was responsible for the recent Global Financial Crisis and to what extent did one country's financial market failure spread to the global economy? In the open economy model, all countries' are interdependent with the other countries' for various economic activities. There are cross dynamic structural linkages within institutions, in the global circular flow of income, where the negative contagious effects of one institutional collapse spread into the G-20 region and ultimately turned into a global market failure. The phenomenon of "Too big to fail" [1] became evident when one single institution, having a range of cross dynamic connections with other important institutions failed, and the incidence of this failure had to be borne by the global society. Comparatively, less literature has focused on the issue whether crises are becoming more contagious across geographical borders. The cross-border nature of crisis has created the need for reforming the global financial architecture. It will be insightful to introspect whether the prevalent crisis was internationally linked or was idiosyncratic and the related impact were merely coincident or a combination of the two. This chapter and chapter eight has focused on the following questions, whether any distinct economic pattern is visible in the various major economic crisis (1997 Asian crisis, 2007-10 global financial crisis, and 2010 Euro nation crisis) and whether they have any quantifiable similarities? In this research, more focus and attention will be given to the Global financial crisis (2007-10). The major economic crises covered will focus on three case studies namely the Asian financial crisis, the Global Financial Crisis, and the Euro crisis. Though each crisis has unique features, the researcher will restrict the research on a comparative study of major economic crisis, within the framework of the principle of global financial integration.

[1] Andrew Ross Sorkin, *Too big to fail: The inside story of how Wall Street and Washington fought to save the financial system--and themselves* (Penguin Books 2010).

1.1. Conceptual Understanding of Financial Crisis

"Parties to financial contracts in many countries, at the same time conclude that the contracts they hold are unlikely be honored by counterparties or that the financial assets that they hold are likely to be worth substantially less than previously thought."[2]

This condition is a concern for financial institutions and as a consequence they cease to advance funds. The customer typically demands repayment of deposits and advances before maturity period because of which loan and the trading volume fall substantially. The affected individual and financial institution request their repayment in terms of cash or gold and are not ready to accept securities as repayment. This leads to decrease in the price of financial assets. The crisis confronted individual financial institution or region specific institutions become contagious and spreads across the globe due to increase in cross-border financial linkages.[3]

"A wide range of financial assets can be subject to such simultaneous "loss of confidence" including stocks, government bonds, bank deposits, asset-backed securities and insurance contracts. It would be wrong, therefore, to associate global financial crises with deficiencies in any one type of financial counterparty, such as governments, or with sharp fall in the values of any one type of financial assets, such as stocks."[4]

Reinhart and Rogoff (2009), *"financial crises are an equal opportunity menace."*[5]

The characteristics of the financial turmoil change based on specific circumstances. In case of GFC, the identified causes were changes in asset prices, large-scale off balance sheet transaction and 'regulatory arbitrage'[6] in micro and macro prudential norms. However,

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[2] Financial Times lexicon, 'Definition of global financial crisis' <http://lexicon.ft.com/Term?term=global-financial-crisis> accessed 20-Feb-16.
[3] Ibid.
[4] Ibid.
[5] Carmen M. Reinhart and Kenneth S. Rogoff, 'Banking Crises: An Equal Opportunity Menace' (2008) Working Paper 14587, National Bureau of Economic Research , 17 <http://www.nber.org/papers/w14587.pdf> accessed 20-Feb-16
[6] Regulatory arbitrage is a practice whereby firms capitalize on loopholes in regulatory systems in order to circumvent unfavourable regulation. Arbitrage opportunities may be accomplished by a variety of tactics, including restructuring transactions, financial engineering and geographic relocation; see also, INVESTOPEDIA, 'Regulatory Arbitrage Definition | Investopedia' <http://www.investopedia.com/terms/r/regulatory-arbitrage.asp> accessed 14-Feb-16.

financial turmoil may also be driven by behavioral factors such contagion, herd-effect, spillovers, and asset price burst. Keynes' notion of 'animal spirit' can explain the irrational behavior of stakeholders during the times of market failure.[7] The phenomena, where financial assets and credit bubbles get inflated beyond rational level, finally, turn into a burst leading to catastrophic shock. (Claessens & Kose, 2013).[8]

1.2. Kinds of Financial Crisis

Claessens & Kose (2013)[9] described three types of crisis: *currency or sudden stop crisis, foreign debt crisis and systemic banking crises.*

1.2.1. Currency Crisis is the result of the speculative attack on the currency resulting from high devaluation (or depreciation). It may also be the outcome of a sudden rise in interest rate or sudden increase in the amount of international reserves.

The speculative attack does not impact the behavior of foreign investors in a fixed exchange rate system because the central bank intervenes in the forex market as and when required. The rational investors hold currency till the exchange rate regime remains intact. However, these investors start dumping currency at the time when exchange rate system is about to fail and this leads to a situation known as collapse of currency. On the other side, contemporary model of currency crisis elucidate, how rapid deterioration of balance sheets connected with volatility in assets prices, and exchange rate lead to the currency crisis as was experienced in the Asian crisis 1997. In the Asian crisis, the large sovereign debt of local private banks, denominated in foreign currency led to the banking cum currency crisis.[10]

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[7] Hersh Shefrin and Meir Statman, 'Behavioral Finance in the Financial Crisis : Market Efficiency, Minsky, and Keynes' [2011] Santa Clara University , 22 <http://www.russellsage.org/sites/all/files/Rethinking-Finance/Shefrin%20Statman%2001272012.pdf> accessed 20-Feb-16.

[8] Stijn Claessens and M. Ayhan Kose, 'Financial Crises: Explanations, Types, and Implications' (2013) WP/13/28 IMF Working Paper , 6 <https://www.imf.org/external/pubs/ft/wp/2013/wp1328.pdf> accessed 20-Feb-16.

[9] Ibid.11-18.

[10] Paul Krugman, 'Balance Sheets, the Transfer Problem, and Financial Crises' (1999) 6(4) International Tax and Public Finance, 459.

Sudden Stop or Balance of Payment crisis is defined as a substantial fall in capital inflow or quick deficiency in aggregate foreign capital flows of the country, leading to inadequate foreign capital to finance current account deficit. This financial vulnerability leads to deterioration in the current account deficit which has serious impact on production and employment.[11]

The Sudden stop crisis originate in balance sheet disequilibrium, increased interest rate of the native and other countries and spillovers-effect[12] in risky assets, leading to a capital flight to the native and other countries (Calvo, Izquierdo, and Loo-Kung, 2005).[13] In this situation, the capital fund borrowed by a firm are inadeqate for import payment where the borrowed capital funds of firms fall short of import payment, and this phenomenon is known as a sudden stop. The high external debt reduces the aggregate demand and leads to a fall in GDP of the host country. The financial bankruptcy of the host country takes the form of negative externalities, finally leading to market failure.[14]

The sudden stop illustrates the pattern of capital movement, where a large amount of capital inflow is experienced during the ex-ante crisis period leading to excessive speculation in the cross-border financial market. This excessive specualtion is not based on ground reality which leads to a quick reversal of the captial inflow in the ex-post crisis senario and this cynical sentiment in the financial market result in a severe reduction in capital flows. The global financial crisis typically reflected this sudden stop phenomena.[15]

[11] Guillermo A. Calvo and Carmen M. Reinhart, 'When Capital Inflows Come to a Sudden Stop:Consequences and Policy Options' [1999] Preliminary draft , 3 <http://www.columbia.edu/~gc2286/documents/ciecpp6.pdf> accessed 21-Feb-16.

[12] The spillover effects are economic events in one context that occur because of something else in a seemingly unrelated context. For example, externalities of economic activity are non-monetary effects upon non-participants.

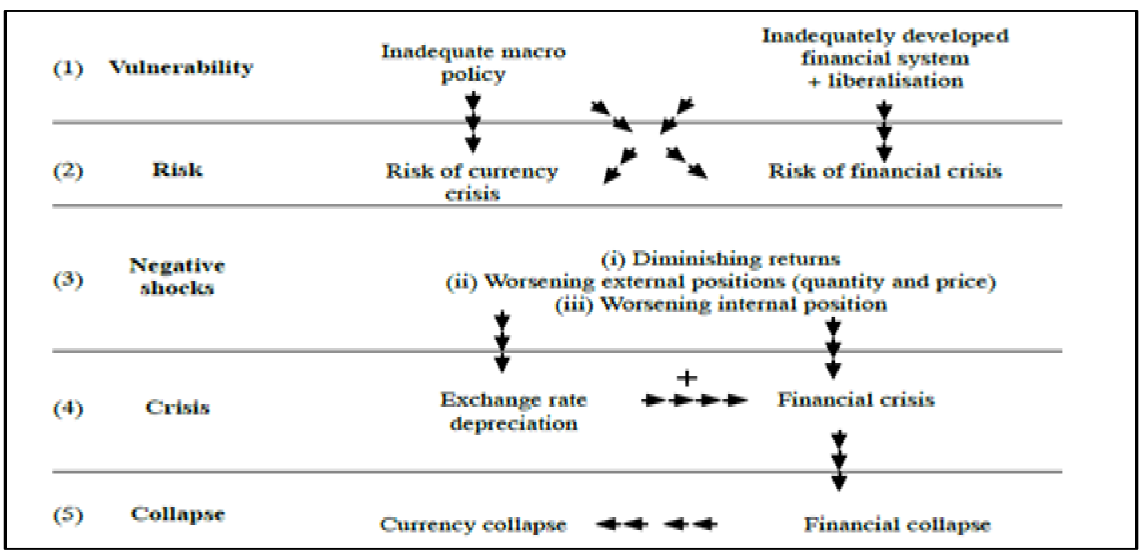
[13] Guillermo A. Calvo, Alejandro Izquierdo, and Rudy Loo-Kung, 'Relative Price Volatility under Sudden Stops: The Relevance of Balance Sheet Effects' (2005). National Bureau of Economic Research Working Paper 11492, 7 <http://www.nber.org/papers/w11492.pdf> accessed 21-Feb-16.

[14] Viral V. Acharya and others, 'Market Failures and Regulatory Failures: Lessons From Past and Present Financial Crises' (First Draft, 5 December 2009) <http://pages.stern.nyu.edu/~sternfin/vacharya/public_html/market_failures.pdf> accessed 21-Feb-16.

[15] Gian-Maria Milesi-Ferretti and Cedric Tille, 'The Great Retrenchment: International Capital Flows During the Global Financial Crisis' 26(382011) Economic Policy, 285.

1.2.2. Foreign Debt Crisis is a situation where the debtor country is not in a position to repay its external debt. This is also known as a sovereign debt crisis. In this form of crisis, there is an absence of gunboat diplomacy[16] where the creditor cannot seize collateral from another country when it refuses to honour its debt obligations[17] leading to risks and uncertainty for lenders. In the International economic law, there is clear incentive for not losing trust and goodwill[18] otherwise, threat will be created for future lending and access to the global financial market. The opportunity cost associated with the debtor to repay debt in case of non-repayment of debt is very high with regard to ensuring future access to global finance [19] and external debt over and above 35% of national income establish debt intolerance of concerned countries which leads to a situation of foreign debt crisis. The recent Greek and the Euro crisis are an example of the external debt crisis.

Figure I : Inter-relationship between currency crises and financial crisis[20]



[16] Foreign policy carried out with the backing of the threat or use of military force.
[17] Stijn Claessens and M. Ayhan Kose (n 8) 14.
[18] Ugo Panizza, Federico Sturzenegger, and Jeromin Zettelmeyer, 'The Economics and Law of Sovereign Debt and Default' (2009) 47(3) Journal of Economic Literature, 676 <http://people.ucsc.edu/~hutch/Econ241a/Articles/Panizza_Econ%26Law_SoverignDebt_JEL2009.pdf> accessed 21-Feb-16.
[19] Jeremy Bulow and Kenneth Rogoff, 'Sovereign Debt: Is to Forgive to Forget?' (1989) 79(1) American Economic Review 43 <http://scholar.harvard.edu/files/rogoff/files/51_aer1989.pdf> accessed 21-Feb-16.
[20] Pierre-Richard Agénor, Marcus Miller, and David Vines, *The Asian Financial Crisis: Causes, Contagion and Consequences* (Cambridge University Press 2006) 68.

1.2.3. Systemic Banking Crisis[21]takes place when several banks in a country face liquidity problem. This situation occurs when banks are hit by an outside shock or when the failure of one bank or group of banks spreads the insolvency problem in the financial system. In this phenomena, financial sectors experience significant financial distress, and financial institutions face great difficulties repaying contracts on time. Most of the banking aggregate capital is exhausted. This disturbance is not contained but turnes out to be contagious and spreads rapidly to other countries. This crisis arises on account of large current account deficits, unsustainable public debt, excessive credit booms, large capital inflows, balance sheet fragilities, combined with policy paralysis, currency, maturity mismatches, and off-balance sheet operations of the financial sector.[22]

The failure of individual banks create a herd-effect in the entire financial system. The depositors withdraw liquidity merely out of fear and others also follow suit. A considerable amount of liquidity withdraws because of a self-fulfilling belief of bank collapse. The possibility that small shocks may turn into big market failure increases. Regardless of classification, there may be possibilities of overlap and mixture of currency crisis and foreign debt crisis in any given crisis. This situation was observed in the “Too big to fail” doctrine, and subsequently, liquidity problem was faced by Bear Stearns, Citigroup, Bank of America, and other Systemically Important Financial Institution (SIFI) across the globe.[23]

2. Origin of Financial Crises: Causes and Features

2.1. History of Financial Crisis

The historical evidence provides a structure to introspect different crisis in the current context. The distinctness of each crisis can be identified on the basis of the following fundamental questions like –What were the cumulative reasons for the crisis, why was the

[21] The World Bank, ‘Banking Crisis’ <http://www.worldbank.org/en/publication/gfdr/background/banking-crisis> accessed 21-Feb-16.
[22] Ibid.
[23] Stijn Claessens and M. Ayhan Kose (n 8).

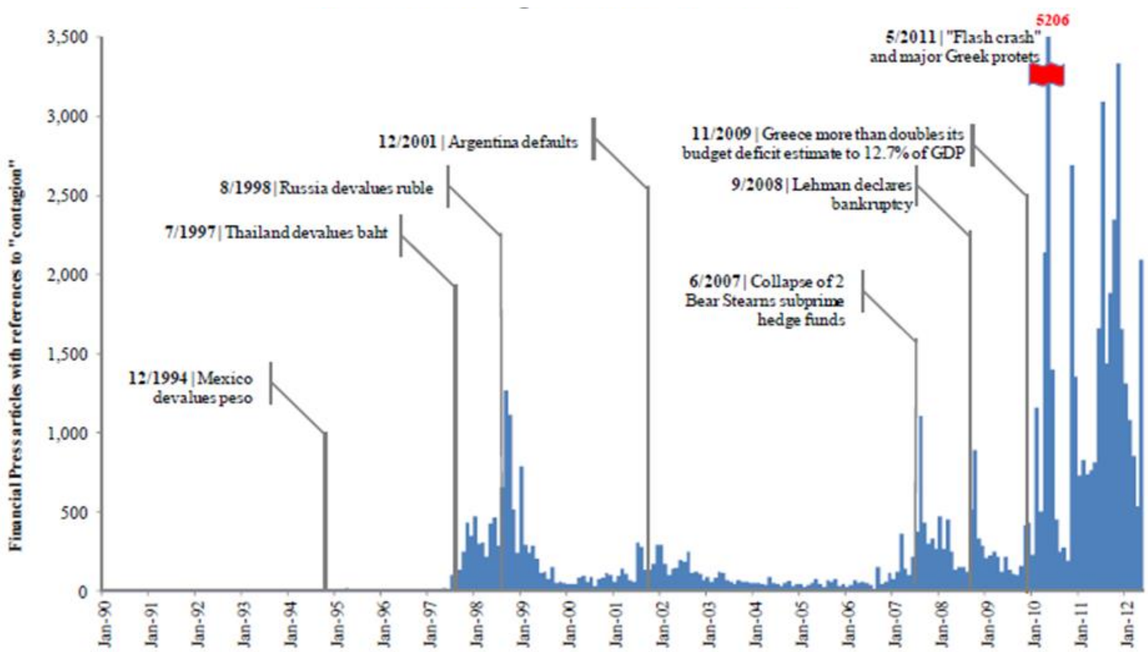
crisis contagious in nature, how is the present crisis different from the previous financial crisis? The GFC triggered from developed countries to developing countries, and subsequently to the global economy due to financial innovation, the rapid growth of securitization, cheaper and easier access to capital funding, high leverage (over and above threshold limit) resulting into the accumulation of financial imbalance. During the boom phase of the cycle, there was less concern about the toxic flow and financial imbalance. The stakeholder and regulators were optimistic about the market and available liquidity. The bubble of positive expectation in the market, proved to be unsustainable in the long run. The US sub-prime mortgage imbalance flared into financial market insolvency causing the interbank money market to freeze. Similar herd-effect features were observed in previous major financial crisis.[24] The global financial system has been a major source of external finance for all countries over the past decades. It was not surprising that the financial inter-connection and in particular capital flow ties have been identified as one of the main channels of the transmission in 2007-09 crisis. Different group of countries have been affected differently because they possessed varying intensity of global financial integration, leading to the simplistic interpretation that "more integration = more contagion."[25] In a world of uncertainty and integration, incomplete insurance markets, informational costs and contagious changes of mood, as well as ex-ante and ex-post valuations of financial assets may be radically different, to the point that market corrections may be abrupt, overshooting and destabilizing.[26]

[24] Jean-Claude Trichet, 'Jean-Claude Trichet: What can central banks do in a financial crisis?' (29-Apr-10). the Susan Bies Lecture, Kellogg Distinguished Lecture Series, Evanston, Illinois <http://www.bis.org/review/r100429d.pdf?frames=0> accessed 22-Feb-16.

[25] Kristin J. Forbes, 'The "Big C": Identifying and Mitigating Contagion' (Jackson Hole Symposium, the Federal Reserve Bank of Kansas City, 6 September 2012) 2 <https://www.kansascityfed.org/publicat/sympos/2012/kf.pdf> accessed 22-Feb-16.

[26] Ricardo Ffrench-Davis, 'Reforming Macroeconomic Policies in Emerging Economies: From Procyclical to Countercyclical Approaches' in Sebastian Dullien and others (ed), *The Financial and economic crisis of 2008-2009 and developing countries* (United Nations 2010) 273.

Figure II[27] : History of Major Contagion Crises



Sources: Factiva monthly search for number of articles using the term "contagion" in the *Commodity/Financial News* or *Economic News*.

The reseach undertaken by Laeven and Valencia (2013) comprising of a total number of 431 crisis revealed that out of 431 crises 147 were banking crises, 217 were currency crises, and 67 were sovereign debt crises. Over the period of 1970 to 2011, they also proposed 68 of the crisis to be twin crises, and 8 were classified as triple crises (Figure III.B **).**[28] Reseach undertaken by Claessens and Köse (2013) stated that several countries experienced multiple crisis. Their reseach identified overlap and relative coincidence in some of the crises, for example, the systemic banking crisis was a combination of currency crisis and sovereign crisis, also overlapping with other type of crisis. From the total of 67 sovereign crisis, 20 were classified as banking crises and 42 were identified as currency crises.[29] In

[27] Kristin J. Forbes (n 25) 48.
[28] Luc Laeven and Fabián Valencia, 'Systemic Banking Crises Database: An Update' [2012] IMF Working Paper 12/163 , 11 <https://www.imf.org/external/pubs/ft/wp/2012/wp12163.pdf> accessed 22-Feb-16.
[29] Stijn Claessens and M. Ayhan Köse, 'Financial Crises: Review and Evidence' (2013) 13 Central Bank Review ,14 <https://www3.tcmb.gov.tr/cbr/index.php/cbreview/article/viewFile/402/328> accessed 22-Feb-16.

the following figure III A, the overlap of Sudden Stop crisis in combination with currency crises and balance of payment crises and sovereign crises has been described.[30]

Figure III.A : Coincidence and overlap of various Financial Crisis : 1970 to 2011[31]

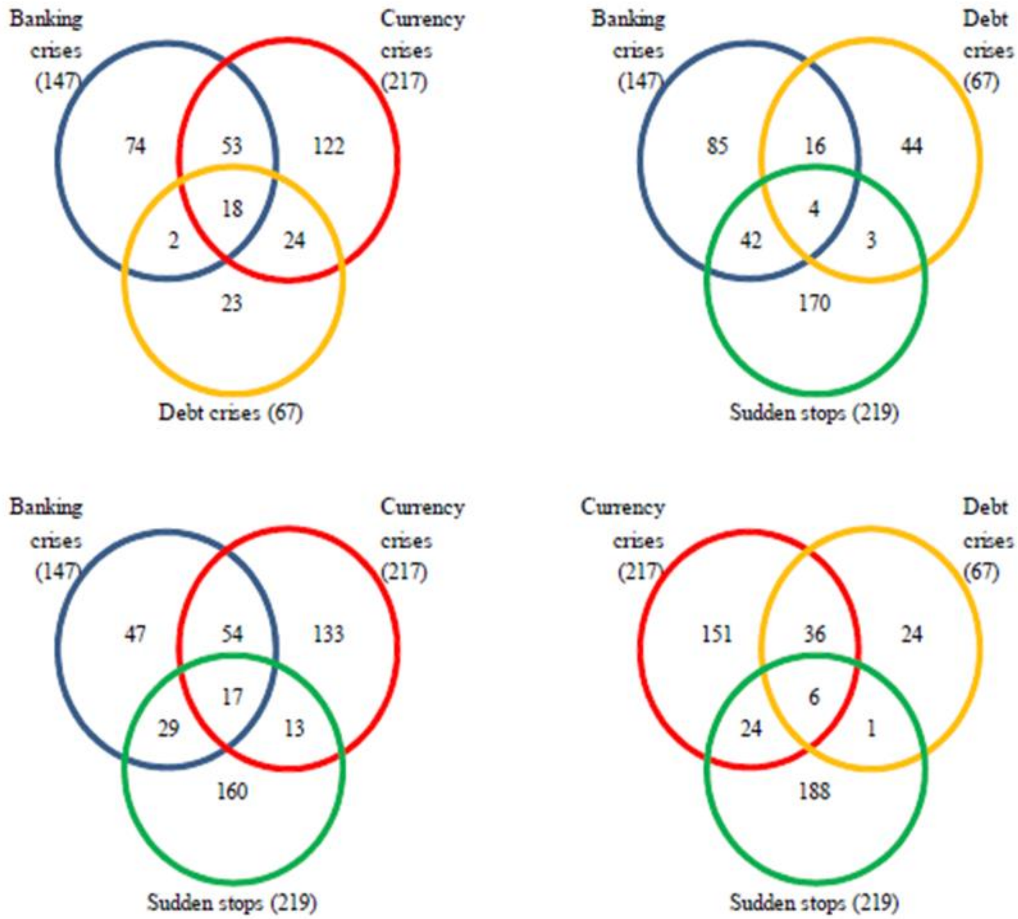
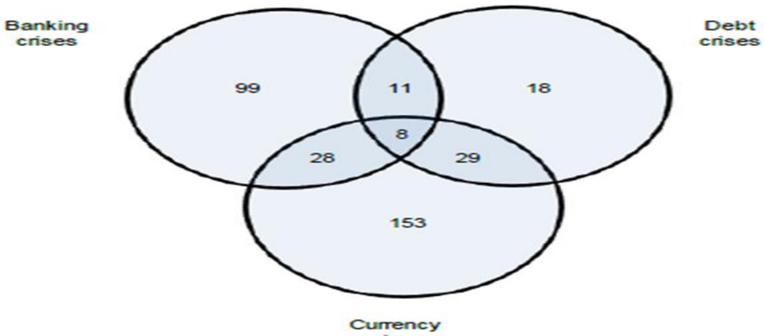


Figure III.B : Simultaneous crises[32]



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[30] Ibid.15.
[31] Ibid.15.
[32] Luc Laeven and Fabián Valencia (n 28) 12.

2.2 Causes of Financial Crisis

The banks and financial institutions provide loans and advances based on a set of rules and regulations. The subprime problem occurred when housing loans were undercapitalized and retrograde standards were reflected by offering loans to the sub-prime lender with the knowledge that the possibility of loan default can be high. Clearly, the loan amount was over and above repayment capacity of the borrowers. Banking crisis are more likely to occur near the peak of the business cycle just before the start of recession when repayment of loan outstanding faces default initially and then at an increasing rate. The financial participants, noticing the chain of events, understand the signal of high risk if their deposit remains in the bank and as a result, start withdrawing cash or liquidity from the financial market which led to the bursting of the subprime bubble. It should be further noted that in the US, large government support for housing finance programme was provided by government-sponsored enterprises Fannie Mae and Freddie Mac.[33] Both these institutions had taken excessive risk in sub-prime lending. The government policy to pursue accommodative monetary and fiscal policy, in the pre-crisis period, promoted inefficiency and speculation in the market. Thus, the same was a very short term approach of policy makers without looking into long-term stability and sustainability issues. The global financial crisis had many common elements of origin with other financial crises (see Calomiris (2008) [34]) like unsustainability of increasing asset price rises, credit booms that led to excessive debt burdens, the backlog of marginal loans and systemic risk and the failure of regulation to match up with financial innovation.[35]

The seeds of the global financial crisis originated in the 1990's when the developed countries embarked on their propaganda to the developing world to open their economies and integrate their economies with the rest of world. The subsequent global financial

[33] Dick K. Nanto, 'The Global Financial Crisis: Analysis and Policy Implications' (2 October 2009). Congressional Research Service (CRS) Report for Congress, 33 <https://www.fas.org/sgp/crs/misc/RL34742.pdf> accessed 23-Feb-16.

[34] Charles W. Calomiris, 'The Subprime Turmoil: What's Old, What's New, and What's Next; IMF Ninth Jacques Polak Annual Research Conference; November 13 and 14, 2008' (The 9th Jacques Polak Annual Research Conference, Hosted by International Monetary Fund, 13-14 November, 2008) 7 <https://www.imf.org/external/np/res/seminars/2008/arc/pdf/CWC.pdf> accessed 23-Feb-16.

[35] Stijn Claessens and others, 'A Cross-Country Perspective on the Causes of the Global Financial Crisis' in Gerard Caprio (ed), *The evidence and impact of financial globalization* (1st ed. Elsevier 2013) 737–752.

integration evolved without fulfilling the prerequisites for integration which led to a series of crisis in the developing countries during the period of 1990's to 2000's. The crisis in Asia, Latin America, and Russia was restricted to region specific, and the loss to the world economy was limited. However, because of the significant international financial integration, the size of market failure in GFC proved to be exorbitant for the world.[36]

2.3. Features of Financial Crisis

2.3.1. Asset Price Bubbles

Asset price bubble is a phenomenon when the price of an asset, for example, housing, stock, bonds, commodity, or gold are exaggerated. The increase in asset price is not supported by the underlying demand for the product. The asset price sharply rises at a sustained rate and their valuation is not justified by fundamental logic leading to a burst.[37] According to Anna Scheerbina (2013),[38] the asset bubble is a deviation of the market price from the asset's fundamental value. Greenspan's famous "irrational exuberance" explanation implied that asset prices may be driven by something other than ground rules.[39]

Based on the following figure IV, the feature of the asset price bubble was similar in different crises. Firstly, asset price rose sharply and then faced sharp contraction. The asset price trend reflected an inverse U-shape as demonstrated in the sample financial crisis. The real house price index is equal to 100 and the time period is five years prior to the banking crisis, Big 5 refers to the average indices for five major banking crisis i.e. Spain (1997), Norway (1987), Finland (1991), Sweden (1991), and Japan (1992). For the sub-prime crisis

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[36] Salif Koné, 'Is Economic Integration Between Developing Countries a Singular Process?' [2012] Journal of Economic Integration, Center for Economic Integration, Sejong University , 386 <http://www.e-jei.org/upload/JEI_27_3_386_409_458.pdf> accessed 23-Feb-16.

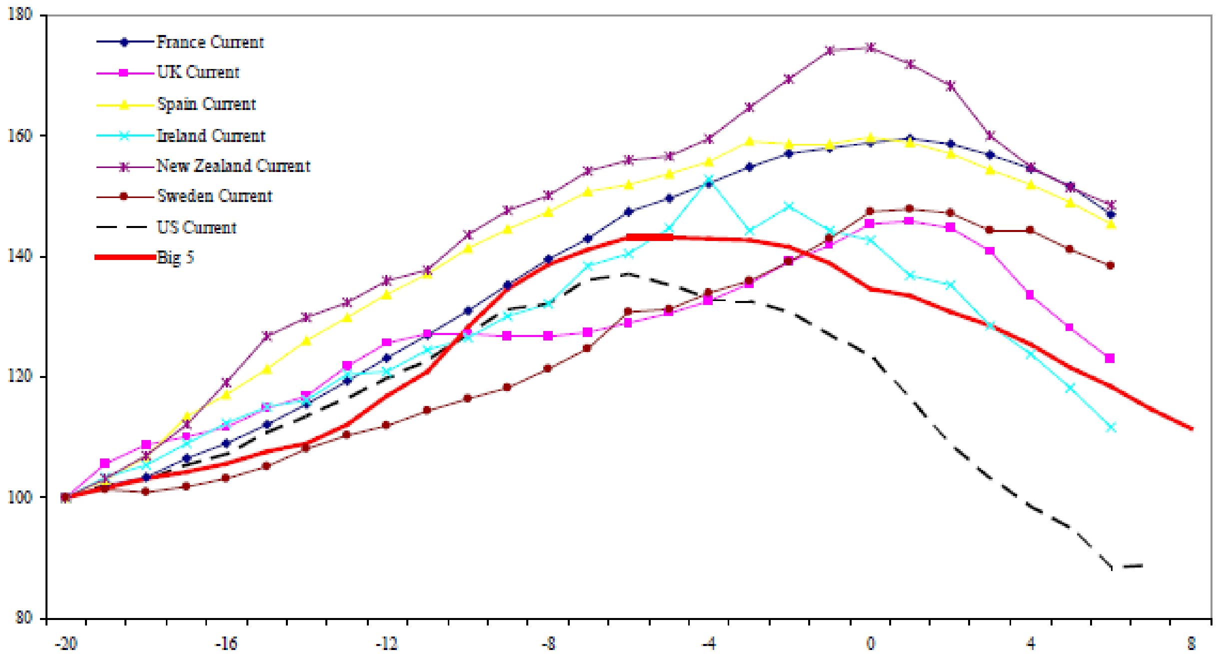
[37] Financial Times lexicon, 'Asset Bubble Definition' <http://lexicon.ft.com/Term?term=asset-bubble> accessed 23-Feb-16.

[38] Anna Scherbina, 'Asset Price Bubbles: A Selective Survey' [2013] IMF Working Paper 13/45 , 3 <https://www.imf.org/external/pubs/ft/wp/2013/wp1345.pdf> accessed 23-Feb-16.

[39] Douglas D. Evanoff, George G. Kaufman, and A. G. Malliaris, 'New Perspectives on Asset Price Bubbles (Ch 1)' in Douglas D. Evanoff, George G. Kaufman, and A. G. Malliaris (ed), *New perspectives on asset price bubbles* (Oxford University Press 2012).

estimation year is 2007 Q3 where the data is taken from the S & P Case-Shiller National House Price Index.[40]

Figure IV: Financial crisis in relation to Asset Price Bubbles[41]



Sources: BIS, OECD, and Haver Analytics[42]

Investors fell into the trap of bandwagon effect without looking into the important indicators of overall market fundamentals. The significant increase in return in stock price influenced other investors to invest even more. This ultimately resulted in a rise in stock price over and above the economy performance of the real economy.

As prices rose, investors' continued with risky investment until the bubble burst. Several research outcomes have described that the bubble burst not on account of speculation and bounded rationality but the bubble was created due to financial manipulation.[43] The bubble

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[40] Stijn Claessens and others, 'Lessons and Policy Implications From the Global Financial Crisis' [2010] IMF Working Papers WP/10/44 , 31 <https://www.imf.org/external/pubs/ft/wp/2010/wp1044.pdf> accessed 23-Feb-16.
[41] Ibid.
[42] Ibid.
[43] Peter M. Garber, 'Famous First Bubbles: The Fundamentals of Early Manias' (1990) 4(2) The Journal of Economic Perpectives , 53 <http://grizzly.la.psu.edu/~bickes/garber.pdf> accessed 23-Feb-16.

was a clear evidence of an agency problem, where the risk was shifted to the agent, who borrowed to invest. This investment failed to pay returns which put the financial institutions under severe strain.[44] Additionally, a problem can be identified in providing incentives to the investment manager. The investors reward managers based on the total returns they generate. However, managers can always produce returns by taking on more risk and the market provides its own incentives. It is critically important to get incentives right, though, risk can never be reduced to zero (Rajan, 2005).[45] Hong, Scheinkman and Xiong's (2007)[46] research suggests that imperfect information and inconsistency about asset valuation led the asset prices to deviate from real values.

2.3.2. Credit Booms and Bursts

In the ex-ante period of GFC, there was a significant increase in leverage and rapid expansion of credit, in concert with the rise in asset prices. This credit boom which was not due to ground level economy performance, was finally followed by a burst in the credit market along with a drastic reduction in asset prices. The same was observed in the pre-Asian financial crisis of 1997. The meltdown of credit was due to significant high leverage and fallacious presumptions which did not work during the downturn of the business cycle. High credit growth took place due to rapid increase in international capital flows in many countries before the global financial crisis,[47]once affected by global shocks and spillover effects, led to the burst, the effect of which spread across borders on account of financially integrated countries.

The Credit booms reflect incidence of rapid credit growth. The credit boom may lead to vulnerabilities through liberal lending standards, high leverage, and asset price bubbles.

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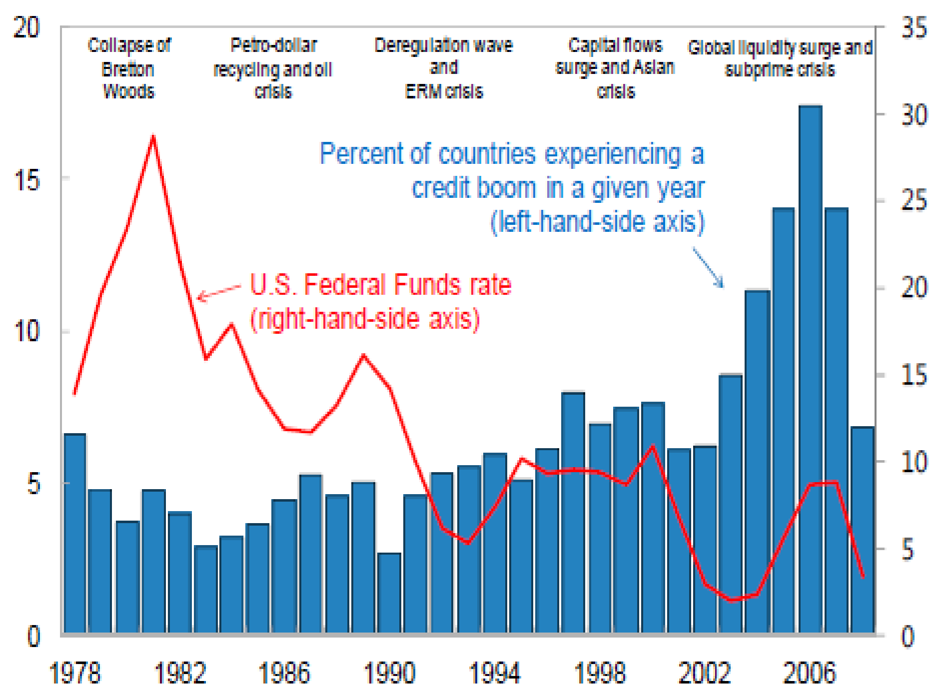
[44] Franklin Allen and Douglas M. Gale, 'An Introduction to Financial Crises' [2007] Wharton Financial Institutions Center , Working Paper No 07-20 , 20 <http://ssrn.com/abstract=1008311> accessed 23-Feb-16.
[45] Raghuram G. Rajan, 'Has Financial Development made the World Riskier?' [2005] National Bureau of Economic Research, Working Paper 11728 , 37 <http://www.nber.org/papers/w11728.pdf> accessed 23-Feb-16.
[46] Harrison Hong, Jose´ Scheinkman, and Wei Xiong, 'Advisors and asset prices: A model of the origins of bubbles' (2008) 89(2) Journal of Financial Economics 268 <https://www.princeton.edu/~wxiong/papers/advisor.pdf> accessed 23-Feb-16.
[47] Stijn Claessens, M. Ayhan Kose, and Marco E. Terrones, 'What Happens during Recessions, Crunches and Busts?' [2008] IMF Working Paper WP/08/274 , 8 <https://www.imf.org/external/pubs/ft/wp/2008/wp08274.pdf> accessed 23-Feb-16.

Historical evidence has proved that such booms have ended in crashes, but some of these crashes have been the worst (Dell'Ariccia and other, 2012).[48] Credit booms are not a recent phenomenon and several countries have experienced a credit boom, since the financial liberalization of the 1990s. It reached an unprecedented high (30 percent in 2006; see Figure V) at the time of GFC, when a combination of factors, such as, the financial innovation in the form of expansion of securitization in the United States, increased the credit growth. The credit to GDP ratio at the start of the boom was 19 percent, compared to credit to GDP ratio of about 30 percent for the entire dataset from 2005 to 2007.

Figure V[49]: Crisis related to Credit Bubble, 1978 to 2008

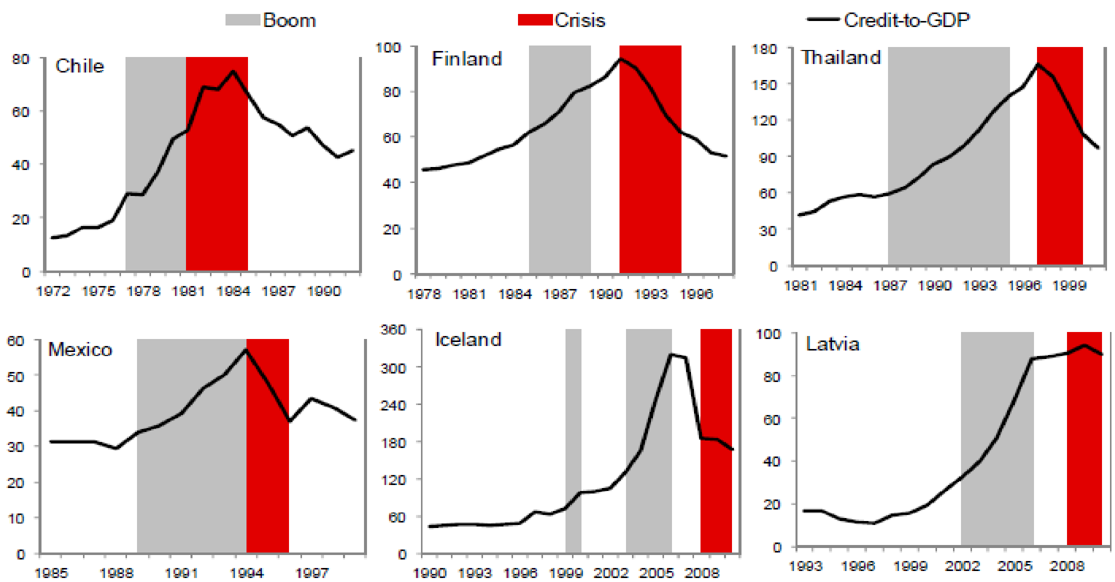


Sources: IMF International Financial Statistics, staff calculations

[48] Giovanni Dell' Ariccia and others, 'Policies for Macrofinancial Stability: How to Deal with Credit Booms' [2012] IMF Staff Discussion Note 12/06 , 5 <https://www.imf.org/external/pubs/ft/sdn/2012/sdn1206.pdf> accessed 23-Feb-16.
[49] Ibid.8

The Credit booms have led to many banking crises over the past 30 years: Chile (1982), Denmark, Finland, Norway, and Sweden (1990/91), Mexico (1994), and Korea, Malaysia, Philippines, and Thailand (1997/98) (Figure VI).

Figure VI: Credit Booms and Burst: Chile, Finland, Thailand, Mexico, Iceland and Latvia[50]



Sources: Laeven and Valencia (2010), IMF *International Financial Statistics*; staff calculations.

In the period of 2001 to 2004, the US monetary policy was easy and expansionary in nature in order to promote credit facility. The main factor behind the rapid increase in house price and leverage was the low-interest rate.[51] As per theory, the change in the rate of interest affected asset prices and borrower's net worth. However, empirical evidence suggests that the declining policy rate effected standard of qualitative lending.[52] Stiglitz and Weiss

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[50] Ibid.12

[51] Kevin J. Lansing, 'Speculative growth, overreaction, and the welfare cost of technology-driven bubbles' [2012] Federal Reserve Bank of San Francisco, Working Paper 2008-08 , 1 <http://www.frbsf.org/economic-research/files/wp08-08bk.pdf> accessed 23-Feb-16.

[52] Angela Maddaloni and José-Luis Peydró, 'Bank risk-taking, securitization, supervision and low interest rates: Evidence from the euro area and the U.S. lending standards' [2010] European Central Bank, Working Paper Series No 1248 , 5 <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1248.pdf> accessed 24-Feb-16

(1981)[53] model of interest rate and agency problem illustrate that excess risk-taking occurred when the rate of interest declined. The other causal features in GFC were the extensive use of complex financial instruments; the increased inter-linkages of national and international financial markets; the high degree of leverage of financial institutions, the central role of the household sector and these features were common to other crises also.

3. Global Financial Crisis (GFC)

3.1 Overview of GFC

The GFC began in September 2008, and it launched a chain of inter-connected events. The world's giant company, General Motors, faced the problem of liquidity and short-term fund crunch. Washington Mutual became the world's largest bank failure. Lehman Brother became the world's largest bankruptcy ever. The effect of financial catastrophe spread around the world and shattered the confidence in the fundamental structure of global finance. The global financial crisis originated due to sub-prime mortgage asset crunch. The mortgage-backed securities were purchased by almost all the financial intermediaries like pension funds, mutual funds, hedge funds etc. in the US in the year 2005 to 2007. These asset lucrative incentives also attracted the international financial intermediaries. As a result, the international financial intermediaries purchased this asset and this toxic asset spread across the world like a virus in the major global financial centers like U.K., Iceland, France, Germany, Dubai, Japan, China, Hong Kong, Singapore, Malaysia etc. The tsunami waves of this crisis moved around the world from California to Iceland, China and other parts of the world.

The bursting of the housing bubble in the money market led to collapse, not only in the US but also in all financially integrated countries. This affected the real economy where World GDP was reduced drastically, unemployment increased, production decreased and trade decreased, resulting in to the global economic crisis world over. Millions of people around

[53] Joseph E. Stiglitz and Andrew Weiss, 'Credit Rationing in Markets with Imperfect Information' (1981) 71(3) American Economic Review, 393 <http://socsci2.ucsd.edu/~aronatas/project/academic/Stiglitz%20credit.pdf> accessed 24-Feb-16.

the world lost homes and jobs and were unaware about who was responsible for the crisis. No banking, regulatory and government officials were convicted of any wrongdoing.

In the aftermath, some instances were reported where the victims of the meltdown violently responded as in Iceland, where protestors forced the government to fall, in Canada, the ripped off auto workers occupied their plant and in France, violent union members kidnapped their bosses.[54]

Figure VII: Global Financial Crisis events and recession timeline

Year	Quarter	Chain of Event
2007	Q1	Freddie Mac announce that it will no longer buy the most risky sub-prime mortgages and MBS, following losses due to the sharp increase in mortgage delinquency rates.
	Q2	New Century Financial declares bankruptcy; S & P and Moody's downgrade over 100 bonds backed by sub-prime mortgages; Bear Stearns suspends redemptions from certain structured credit funds.
	Q3	Bearn Stearns liquidates two hedge funds invested in MBS; American Home Mortgage Investment Corp files for bankruptcy; BNP Paribas halts redemptions on three investment funds; Bank of England provides liquidity support to Northern Rock.
	Q4	FED creates Term Auction Facility and announces reciprocal swap lines with ECB and Swiss National Bank.
2008	Q1	FED creates Term Securities Lending Facility and Primary Dealer Credit Facility, and increases swap lines with ECB and Swiss National Bank; Northern Rock is taken into state ownership; financing arrangement between JP Morgan Chase and Bear Stearns is approved.
	Q2	S&P downgrades monoline bond insurers AMBAC and MBIA; Bank of America acquires Countrywide Financial.
	Q3	Fannie Mae and Freddie Mac are placed in government conservatorship; Lehman Brothers files for bankruptcy; AIG gets bailed out; SEC issues an emergency order temporarily prohibiting short selling; FED expands swap lines and creates

[54] Terence Mckenna, 'Meltdown - The Secret History of the Global Financial Collapse: A disturbing Doc Zone Documentary about the world economy collapse (2008-2010)' (CBC - Canadian Broadcasting Corporation 2010) <http://www.cbc.ca/player/play/1579275026> accessed 24-Feb-16

		Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility; Goldman Sachs and Morgan Stanley become bank holding companies; JP Morgan Chase acquires Washington Mutual.
	Q4	FED creates Commercial Paper Funding Facility, Money Market Investor Funding Facility, and Term Asset Backed Securities Lending Facility; Wells Fargo acquires Wachovia; FDIC increases deposit insurance coverage; Treasury announces Troubled Asset Relief Program; swap lines are expanded further; IMF announces a short-term liquidity facility; Bank of America acquires Merrill Lynch.
2009	**Q1**	Public support in the financial sector continues; fiscal stimulus packages are put into action.

Source: Federal Reserve Board, IMF International Financial Statistics, World Economic Outlook[55]

3.2. Distinct Characteristics of GFC

In comparison with previous crisis, some distinctive features were observed in the GFC, like, more complicated financial intermediaries and instruments involved, increase in both national and international financial integration, access and experience of new financial instruments across the globe. This has increased the length and breadth of the financial crisis. According to Brunnermeier (2009)[56], the huge dependency on wholesale and short-term funding in many developed and emerging countries led to systemic financial crisis. The problem of balance-sheet shrinking led to the freezing of interbank markets and initiated fire sales through a vicious deleveraging process. The integration of money market borrowing, highly leveraged, under regulated intermediaries, amplified the problem and transmitted the disturbance to the unaffected financial sector. The high degree of financial inter-connection was reflected in the large presence of foreign intermediaries in several financial systems. These factors spread the financial chaos across the borders through

[55] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (2010) 25(62) Economic Policy , 277 <http://www.jstor.org/stable/pdf/40603207.pdf?acceptTC=true> accessed 24-Feb-16

[56] Markus K. Brunnermeier, 'Deciphering the Liquidity and Credit Crunch 2007–2008' (2009) 23(1) Journal of Economic Perspectives , 77 <https://www.princeton.edu/~markus/research/papers/liquidity_credit_crunch.pdf> accessed 24-Feb-16.

several modes. For example, the chaos rapidly spilled over in Germany (IKB Deutsche Industriebank and Sachsen LB July 2007),[57] France (BNP Paribas's money market fund, August 2007)[58] and to Switzerland's two largest banks (UBS and Credit Suisse, June 2008).[59] The forceful deleverage by financial institutions, spread the crisis to other markets through 'common lender effect'.[60] The emerging countries, which were dependent on external financing were affected by capital account and bank funding pressures. It was evident that four days after the Lehman event, there was a significantly larger relative decline in more open countries (Raddatz, 2009).[61]

In the UK, the mortgage lender came under intense stress in the beginning on account of a bank run on wholesale funding dependent with Northern Rock.[62] Notably, low-interest rates and high-risk mortgage also impacted Iceland, Hungary, and the Baltic's where the imbalance was pronounced. The previous introspection of Latin America's debt crisis and the East Asian Crisis indicated that the financial distress stemmed in the official and

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[57] The spillover effects from the subprime crisis on Germany have involved bail-outs of two banks (IKB and Sachsen LB) by publicly-owned financial institutions. In both cases, the problems came to light when the banks' conduits, set up to invest in asset-backed securities including subprime assets, lost access to funding in the short-term ABCP market. While the impact on Germany's banking system has appeared limited so far compared to the other cases, the costs to the public sector have been appreciable and may continue to mount. The rescue of IKB, the first German bank that succumbed to the financial market stress, has raised the costs to the public until now to about 9 billion euro. Losses of some of the stateowned Landesbanken, including Sachsen LB, Bayerische LB, and West LB, have also been considerable, with losses/write-downs totaling around $10.8 billion as of early June 2008.

[58] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (n 55) 274.

[59] The UBS and Credit Suisse were severely impacted by spillover effects from the subprime crisis. The banks had large trading portfolios exposed to subprime-related risks, including direct exposures. Under Basel I, additional capital was not required for such positions. Thus, ahead of the crisis, both banks looked adequately capitalized (risk-weighted) but unweighted capital adequacy ratios were much lower. Exposure to risks via hedge funds was lower. As of early June 2008, UBS had subprime-related losses/write-downs of $38 billion (second behind Citigroup) while Credit Suisse was ninth with $9.6 billion in write-downs. Both banks have needed to raise substantial private capital to strengthen their balance sheets—UBS has raised $28 billion.

[60] IMF, '2008 Triennial Surveillance Review Thematic Findings' (The Strategy, Policy and Review Department, 2 September 2008) , 88 <http://www.imf.org/external/np/pp/eng/2008/090208b.pdf> accessed 24-Feb-16.

[61] Claudio Raddatz K. 'When The Rivers Run Dry: Liquidity And The Use Of Wholesale Funds In The Transmission Of The U.S. Subprime Crisis' [2010] Policy Research Working Paper 5203, World Bank , 24

[62] The key reasons of Northern Rock (NR) downfall relate to specific management and regulatory weaknesses, related to increased liquidity risk from reliance on wholesale financing. As liquidity dried up across the asset-backed markets in a spillover from the subprime MBS, Northern Rock found itself squeezed. Rumours of its troubles, and a slow official reaction, weaknesses in the insolvency framework, combined with low deposit insurance thresholds and long and uncertain pay-out periods, culminated in the run on the bank, a government guarantee of deposits, and its eventual nationalization.

banking sectors.[63] Whereas the GFC was largely contributed by household sector, particularly, mortgage loan market and transmitted to the other sectors, i.e., from production sector to rest of the world economy by declining corporate profits and increasing unemployment, followed by adverse impact on growth and national income. Ireland and Iceland were affected first. The countries that followed were those having strong financial links with the epicenter (the US and the G 20 Countries).[64] The emerging markets were affected due to the indirect effect of a decrease in global demand leading to decline in world trade, and ultimately global trade imbalance turned into an imbalance impacting the global financial system.

4. Global Financial Crisis (GFC), Asian Financial Crisis (AFC) and Euro Crisis (EC) in the backdrop of Global Financial Integration

More than hundred small, and big economic crises have been recorded of different scales, but among all of them, some of the financial market failures like the Great Depression (1929-33), Mexico Crisis (1994), Asian Crisis (1997), Russian Crisis (1998), Argentina's Economic Crisis (1998-2002), Global financial crisis (2007-10) and Euro crisis (2010) have questioned the existing understanding of market failure. This has given the opportunity to undertake a comparative study of two or more crisis. This study focuses on the comparative study of Asian Crisis (1997), Global Financial Crisis (2007) and Euro crisis (2010). The rationale for choosing these crisis is that the first Asian Crisis (1997) was a regional crisis which impacted other interdependent countries because of international financial integration. The Euro crisis (2010) occurred in highly economically and financially integrated Euro economies which gives a new dimension, more so, because it is an excellent example of regional and international financial integration and Global financial crisis (2007-10) is the main theme and concentrated area of research.[65]

An economic crisis can be understood by the Keynesian Macroeconomics model (open economy)

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[63] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (n 55).
[64] Ibid.
[65] Jean-Claude Trichet (n 24).

Y = C + I + G + X - M

Where, Y = national income, C= Consumption, I = Investment, G= Government Expenditure, X= Export and M = Import

In an economic crisis, national income reduces (dependent variable) because of a decrease in all independent variables (C, I, G, X and M).

So,

Y (decrease) ⟶ Decrease (C, I, G, X & M) ⟶ Decrease Price ⟶ Increase Unemployment ⟶ reduction in GDP

In this comparative study, it will be interesting to study variables like C, I, Nx, P, U, GDP growth rate, interest rate, money supply, etc. and their impact with respect to the crisis.

There are various causes behind a big financial market failure, and among others, the impact of Global financial integration (GFI) on GFC is the focus of this study. The impact of GFI with the Global Financial market failure looks conceptually and logically simple, given the explanation that if the financial system of a giant country fails, it will trouble all interdependent countries. The loss and damage of financial shocks depend upon the extent of financial integration and inter-linkages. The greater the global financial integration, the greater effective precaution is required to moderate the effect of negative externalities. So, global financial integration has increased inter-linkages of the financial system, both at the horizontal and vertical level, in the world economy.

4.1. Global Financial Crisis and GFI

In the GFC, the foreign institutional investors had invested in mortgage-backed securities and the collapse of shadow banking mechanism directly impacted the foreign investor. This loss of individual investor aggregated and impacted the national financial system. The shrinking of the financial sector also impacted other domestic sectors like household, production, and international trade and its negative impacts spread to the rest world at high speed. The direct cost and loss to nations varied, based on the intensity, but the indirect cost trends and patterns were strictly similar in the world economy. The US financial stress increased in 2007 Q4 and output losses were reported in 2008 Q1 to 2008 Q3, and then the crisis spread to the rest of the world, based on the extent of global financial integration. Claessens, Dell'Ariccia, Igan and Laeven (2010)[66] research states that the standard parameters/features were common in GFC and previous crisis such as asset-credit bubble, current account deficit, and global financial integration.

The research undertaken by Chen and Quang (2012)[67] state that the international financial integration (IFI) is growth enhancing.[68] However, this IFI functioned adversely at the time of financial shock. It was evident that those countries who had closer integration with the US financial system and direct involvement with asset-backed securities were the first to be affected. Rose and Spiegle (2012)[69] assert that global dynamics have played a significant role in the crisis. The crisis was transmitted across countries through one or more channels and its incidence appears unconnected to national fundamentals. Those countries which experienced a rapid increase in asset prices, and high current account deficits were impacted in their economic performance.[70] Those countries with higher capital mobility reflected a higher incidence of crises or tended to face a higher probability of having a crisis, than countries with lower capital mobility (M. Ayhan Kose and others, 2006)[71]. Lane and Milesi-Ferretti (2010)[72] said that the transmission of the GFC emphasized the role played by GFI. The original shock in the US financial system led to disruption in the financial systems of several advanced European countries and others around the world. In

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[66] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (n 55).

[67] Jinzhao Chen and Therese Quang, 'International Financial Integration and Economic Growth: New Evidence on Threshold Effects' [2012] Working Paper No 2012 – 30, Paris School of Economics , 1 <https://hal.archives-ouvertes.fr/halshs-00710139/document> accessed 25-Feb-16.

[68] See conversely, Hali J. Edison and others, 'International Financial Integration and Economic Growth' [2002] National Bureau of Economic Research, Working Paper No 9164 , 24.

[69] Andrew K. Rose and Mark M. Spiegel, 'Cross-Country Causes and Consequences of the 2008 Crisis: Early Warning' [2009] National Bureau of Economic Research, Working Paper 15357 , 29 <http://www.nber.org/papers/w15357.pdf> accessed 25-Feb-16.

[70] Ibid.27.

[71] M. Ayhan Kose and others, 'Financial Globalization: A Reappraisal' [2006] IMF Working Paper WP/06/189 , 21 <http://www.brookings.edu/~/media/research/files/papers/2006/8/globaleconomics-rogoff/20060823.pdf> accessed 25-Feb-16.

[72] Philip R. Lane and Gian Maria Milesi-Ferretti, 'The Cross-Country Incidence of the Global Crisis' [2010] IMF Working Paper WP/10/171 <https://www.imf.org/external/pubs/ft/wp/2010/wp10171.pdf> accessed 25-Feb-16.

turn, the disruption in the financial system gradually transmitted to the real economy, with the financial crisis-inducing a contraction in economic activity and remarkable declines in international trade and international capital flow in late 2008 and early 2009.[73] Claessens, and others (2010)[74] illustrate a new dimension by adding bank's credit to overseas claims as a variable. This approach helps to understand the epidemic of financial crisis globally through cross-border banking operation. The previous work on contagion (Kaminsky & Reinhart, 2000)[75] was also based on similar dynamics. The fundamental contagion arises when the infected country is linked to others via trade or finance.[76]

4.2. Asian Financial Crisis and GFI

The Asian financial turmoil began in Thailand and was reflected in the sudden stop or currency crisis of Thai baht in 1997. The resulting financial herd-effect spread regionally to the major associated countries. It significantly affected Indonesia, Thailand, and South Korea. Whereas, Hong Kong, Malaysia, and the Philippines were moderately affected, and China, Taiwan, Singapore, Vietnam, and India were least affected. However, the indirect cost and incidence with regard to output, employment, trade, and production were borne by all regions.

The mode of financing and development of ASEAN economies was based on external finance which increased the foreign debt significantly in ASEAN economies in 1997. The Southeast Asian region maintained high-interest rate to induce foreign investors to invest in the Asian economies which led to increased capital inflows in these countries. The Asian economies were growing at the rate of 9 to 10 % GDP in the early 1990's which built a strong reputation of this region globally. The World Bank and IMF coined the model of Asian growth as an "Asian Economic Miracle" whereas substantial research also emerged, which challenged this Asian Tiger model and growth pattern. Paul Krugman's study put forth that the total factor productivity had not increased with the rise in capital investment,

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[73] Ibid.
[74] Stijn Claessens and others, 'Cross-country experiences and policy implications from the global financial crisis' (n 55).
[75] Graciela L Kaminsky and Carmen M Reinhart, 'On crises, contagion, and confusion' (2000) 51(1) Journal of International Economics, 145.
[76] Ibid.

thus this high growth will not be sustainable in the long-run.[77] In the theoretical sense, a large current account deficit is likely to sustain with high growth rate in the short-term but in the long-term, a minor slowdown in growth can make the economy vulnerable and lead to market failure.

The Asian economies faced significantly high current account deficit, and they followed fixed exchange rate system, along with convertible capital account. The capital account convertibility increased the large volume of hot money which was used to finance current account deficit. The size of the hot money bubble increased over and above the threshold limit. The Asian economies were faced with large quantity of leverage access from the global financial system, which increased their foreign exchange risk to an unsustainable level. The ultimate crash of hot money market led to the collapse of their exchange system. This resulted into considerable fright to lenders to withdraw their credit which resulted into the credit crunch situation, and eventually the economy entered into the vicious cycle of bankruptcies.

At the international level, the financial turmoil decreased the foreign exchange reserve and a clear case of capital flight from the home nation to other countries was witnessed on account of lucrative interest rate. However, the Asian countries had not devalued their currency and they kept interest rate higher to avoid the capital flight problem. They intervened in the forex market by buying excess domestic currency at the fixed exchange rate. This policy was not sustainable even in short-run.

This unsustainable foreign currency denominated liabilities grew significantly which created additional bankruptcies. The asymmetric information in the financial markets led to a ‘herd mentality’ among investors, which magnified a small risk in the real economy. The application of network analysis explained the interconnectivity of financial markets and the significance of the robustness of hubs. Negative externalities in the hubs created a ripple effect through the financial system as a whole.

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[77] Paul Krugman, ‘The Myth of Asia's Miracle’ (1994) 73(6) Foreign Affairs , 62 <http://econ.sciences-po.fr/sites/default/files/file/myth_of_asias-miracle.pdf> accessed 26-Feb-16.

The regional financial integration emerged in a strong way after the formation of ASEAN, free trade increased among the member nations and capital flow movement also increased. The ASEAN region progressively evolved towards capital account convertibility which motivated a large number of international investors to invest in this region, leading to increase in capital inflow in this region. However, this region followed fixed exchange rate which goes against the principles of efficiency. For example, an increase in capital inflow improves the regional currency in the foreign exchange market but due to fixed exchange rate mechanism, foreign reserve has to be purchased for maintaining the same exchange rate, and this increases internal debt. According to US Treasury, on a worldwide basis, the capital inflows in emerging markets rose from $25 billion in 1986 to $250 billion in 1996. The share of cross-border portfolio flows accounted for the emerging markets rose from 2% to 30 % while the share of foreign direct investment jumped from 15 % to 40 %[78]. This created bubble in stock market and real estate sector, where the price overvalued rapidly. However, at the ground reality, what existed was poorly planned investment projects, where implicit and explicit government guarantees, along with regulatory gap, led to the problem of moral hazard, eventually resulting in the burst.[79]

With regard to external shocks, the convertibility plan led to demonetization of the economy and deteriorated the health of the financial system. On the other side, the Chinese devaluation of 1994, followed by Yen devaluation in 1996-97, created some competitive loss in Thailand, Korea, and Indonesia. The real exchange rate in Asian countries were seriously affected by the end of 1996. In most of the Asian crisis countries, it was evident that the capital adequacy ratio was low in the banking system and that the quality of capital was low. When the survival of private banks began to be doubted, there was a prompt run to the state banking system, where the deposits were considered fully insured.[80] The foreign loans to private firms were also considered a liability of the government. The Asian crisis

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[78] C-SPAN, 'Asian Monetary Instability before the House Committee on Banking and Financial Services: testimony from Chairman Greenspan regarding the Testimony from Chairman Greenspan, Deputy Secretary Summers and other economists' (13 Novermber 1997) <http://www.c-span.org/video/?95160-1/asian-monetary-instability> accessed 26-Feb-16.

[79] The World Bank, 'Argentina - Financial sector review' (28 September 1998). World Development Sources, WDS 1998-3, Report No. 17864-AR, 12 <http://documents.worldbank.org/curated/en/1998/09/442191/argentina-financial-sector-review> accessed 26-Feb-16

[80] Ibid.12.

was a combination of currency and systemic financial crises. The problem of imbalances in the balance sheet also existed. Asian economies were burdened with excessively high levels of short-term debt. The excessive leverage, dependent on short-term debt, and property bubbles were the identified features in this crises. The following table A[81] reflect the high short-term debt in the Asian crisis as compared to Latin American Countries.

Table A: Foreign Short-term debt to total debt/ reserves: Asian Crises and Latin American Crises[82]

Asian Economies	**Short-term debt/total debt**	**Short-term debt/reserves**
Indonesia	24	160
Korea	67	300
Thailand	46	107
Malaysia	39	55
Philippines	19	66
Latin American Economies	**Short-term debt/total debt**	**Short-term debt/reserves**
Argentina	23	44
Brazil	23	69
Chile	25	44
Colombia	19	57
Mexico	16	126

Source: Bank for International Settlements, International Financial Statistics, World Bank.

In the mid-1997, the first phase of currency depreciation started with a decrease in the value of Thai baht, Malaysian ringgit, Philippine peso, and the Indonesian rupiah. The second round of depreciation began in Taiwan dollar, South Korean won, Singaporean dollar, and Hong Kong dollar. The government intervened in forex market by increasing the interest rates which slowed economic growth and made interest bearing bonds more lucrative than equities. This short-term measure did not work. The crisis spread to cross-border nations due to global financial inter-linkages where interdependent regions were significantly affected. However, the GFI was limited to developed economies plus emerging economies.

[81] Ibid.
[82] Ibid.

The race for financial openness pursued by ASEAN region, without implementing prerequisite precaution led to the trap of financial globalization. IMF extended support to the ASEAN region by way of rescue packages.

Table B: IMF Financial Support [83] (Amounts in U.S. $ Billion)

	Thailand	**Indonesia**	**South Korea**
Date Approved	August 20, 1997	November 5, 1997	December 4, 1997
Total Pledged	$17.2	$40	$57
IMF	$3.9	$10.1	$21.0
U. S.	None	$ 3.0	$5.0
World Bank	$1.5	$ 4.5	$10.0
Asian Development Bank	$1.2	$ 3.5	$ 4.0
Japan	$4.0	$ 5.0	$10.0
Others	$6.6	$26.0	$ 7.0
Change in Exchange Rate(1/7/97 - 22/1/98)	-38%	-81%	-50%
Change in Stock Market (1/7/97 -19/1/98)	-26%	-40%	-30%

Source: International Monetary Fund, Dialogue Database, Wall Street Journal, Financial Times[84]

Access to international finance involves multiple risks. The corporate sectors borrowed short-term loan for long-term projects. The short-term loans got due before the project got functional or before it started generating enough profits to enable repayments to be made.[85] As long as an economy is growing, the rolling over of loans and advances may not be difficult. However, when the financial markets crash, the access to finance or liquidity problem arises where it gets harder to borrow and ultimately, the involved stakeholders become insolvent.[86] Some Asian Countries heavily relied on short-term borrowing (debt of

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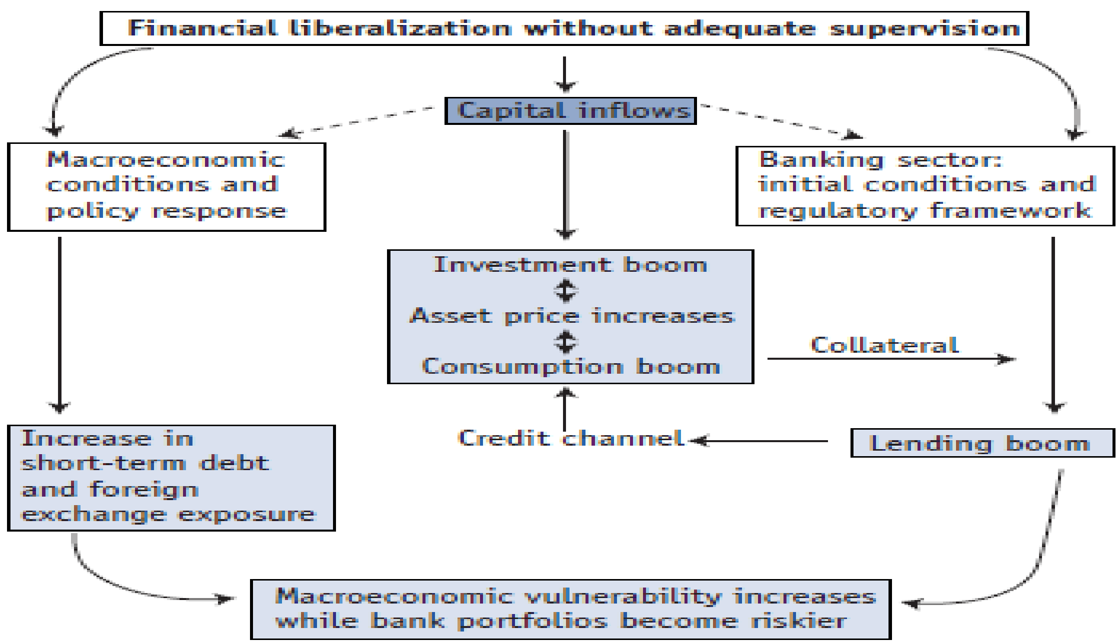
[83] Dick K. Nanto, 'CRS Report: The 1997-98 Asian Financial Crisis' (Federation of American Scientists (FAS), 6 February 1998) <http://fas.org/man/crs/crs-asia2.htm> accessed 26-Feb-16.
[84] Dick K. Nanto, 'CRS Report: The 1997-98 Asian Financial Crisis' (Federation of American Scientists (FAS), 6 February 1998) <http://fas.org/man/crs/crs-asia2.htm> accessed 26-Feb-16.
[85] Louis Uchitelle, 'Economists Blame Short-Term Loans for Asian Crisis' *New York Times* (8 January 1998) <https://partners.nytimes.com/library/financial/010898asia-outlook.html> accessed 26-Feb-16.
[86] Ibid.

one year or less) towards the end of 1996 and as a percentage of their total debt was found to be 61% in Indonesia, 67% in Korea, 58% in the Philippines, 65% in Thailand, and 84% in Taiwan, 82 % in Hong Kong and 92 % in Singapore.[87] Mostly, all of the Asian Economies private sector borrowing depended on external debt and the repayment became difficult. This was a classical case of the fallacy of composition.[88] Even if each individual loan is financially viable, the aggregate loans may not be viable, so the nation may fall short of the foreign exchange necessary to meet the repayment schedules. The Asian financial crisis affected the world economy, both in microeconomic and macroeconomic sense. In microeconomic sense, the crisis affected specific sectors, each in a different way, depending on integration with Asian economies and in macroeconomic level, it reduced national income and created balance of payment disequilibrium.

Figure VIII: Capital Account Convertibility without fulfilling Prerequisites



Source: Alba and others, 1998[89]

[87] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, 'What caused the Asian currency and financial crisis?' (1999) 11(3) Japan and the World Economy , 305.

[88] Business Dictionary, 'What is fallacy of composition? definition and meaning' <http://www.businessdictionary.com/definition/fallacy-of-composition.html#ixzz3K5J2WLna> accessed 26-Feb-16.

[89] Pedro Alba and others, 'Volatility and Contagion in a Financially Integrated World: Lessons from East Asia's Recent Experience' [1999] World Bank and Central Bank of Chile, Policy Research Working Papers, 38.

The Asian crisis replicated the model of structural and policy distortion. Once the crisis began, market overreacted and herd behavior became the cause of the fall in exchange rates and the asset prices also weakened (Corsetti, Pesenti & Roubini, 1999).[90] The problem reflected three different interrelated dimensions at the corporate, financial and international level. At the corporate level, the pressure to maintain high rates of economic growth led to state assurance to private projects, a direct subsidy to favored industries without noticing the costs and riskiness of the investment projects.[91] Even though there was pessimistic expectation, the investment rates, and capital inflow remained significantly high. At the international level, the fall in interest rates in developed countries motivated large foreign flows to Asian countries. These were also due to capital account liberalization and financial market deregulation in the 1990s, which was the reason for increased supply elasticity of funds from abroad (Stiglitz, 1998).[92] There was the presumption that the cross border liabilities of the crisis-affected countries would be bailed-out by the state or rescue operation by the IMF support programme. [93]

The currencies of the Asian economies were effectively pegged to the dollar. This was done to facilitate external financing of domestic projects. The credible peg led to a reduction of the currency risk premium. This policy was consistent with the strategy of sustaining high investment rates, which were supposed to translate into high rates of productivity and output growth.

In the period of 1990-1993, the Thai stock market grew by 175 % (395% of property sector) but then lost 51 % (73% for the property sector) of its value between 1993 and end of 1996. In Malaysia, the stock price rose by 145 % (160 % for the property sector) between 1990 and late 1996. In the Philippines, the stock market increased by 386 % (271 % for the

[90] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, ‘Paper tigers? A Model of the Asian Crisis’ (1999) 43(7) European Economic Review , 1211.
[91] Michael Pomerleano, ‘The East Asia Crisis and Corporate Finances: The Untold Micro Story’ [1999] The World Bank, Policy Research Working Papers <http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-1990> accessed 26 Feb-16.
[92] Joseph Stiglitz, ‘The role of international financial institutions in the current global economy’ (27 February 1998). The Chicago Council of Foreign Relation <http://go.worldbank.org/YFAR5P3090> accessed 26 Feb-16.
[93] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, ‘What caused the Asian currency and financial crisis?’ (n 90).

property sector) between 1990 and 1996. In Hong Kong, stock prices increased by 344% (423% for the property sector), while in Singapore it rose by 92% (181 % for the property sector), in Taiwan it rose by 53 % (-9.8 % for the hotel sector). In Indonesia, the market increased by 53 % between 1990 and 1996, a period clearly characterized by substantial volatility in stock prices.[94] So, at the time of high growth rates, the economy reacted with overly optimistic belief that the economic expansion will continue unabated in the upcoming year. This led to increase in consumption and investment along with an increase in capital inflows. However, the adverse situation in the real economy and the unrealistic expectation about the long-run got exposed in the form of financial turmoil (Rodrik, 1998).[95]

In Asian financial crisis, there was a fall in national saving caused by a decrease in public saving (because of the higher budget deficit) which is typically seen as more disruptive than a fall in private saving. The public sector deficits also increased. The past crisis like the Chilean 1977-81 crisis occurred in spite of the fact that the fiscal balance was in surplus. The Mexican crisis, in which, the current account imbalance was largely due to a fall in private saving and a boom in private consumption. These occurred because of over positive expectation for future growth, in an environment in which liberalization of domestic capital markets loosened liquidity constraints.[96]

As per theory, the economies that are relatively open are expected to face lesser sustainability problems because the large export sector generates foreign exchange reserve which strengthens the country's ability to service its debt obligation. Yet, greater openness also makes a country more vulnerable to trade shocks and restrictive trade policies in other countries. Most Asian countries were significantly open because of which most of the East Asian economies, in 1996, experienced trade shocks and financial shocks.

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[94] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, 'What Caused the Asian Currency and Financial Crisis? Part I: A Macroeconomic Overview' [1998] National Bureau of Economic Research, Working Paper 6833 , 16 <http://www.nber.org/papers/w6833> accessed 27-Feb-16.

[95] Dani Rodrik, 'Who Needs Capital-Account Convertibility?' in International Finance Section (No, 207) (ed), *Essys in international Finance: Should the IMF pursue capital-account convertibility* (Department of Economics, Princeton University 1998).

[96] Sebastian Edwards, 'A Tale of Two Crises: Chile and Mexico' [1996] National Bureau of Economic Research, Working Paper 5794.

The pre-crisis share of non-performing loans as a proportion of total lending is estimated at 13% in Thailand, 13 % for Indonesia, 8 % for Korea, 10 % for Malaysia, 14 % for the Philippines and 4 % for Singapore. This shows, the strong correlation between the amount of bad loans and extent of the currency crisis.[97]

The Asian countries suffered short-term liquidity problem when the available stocks of the reserve were low relative to the overall burden of external debt services. Liquidity problem further increased when external creditors panicked. The crisis had taken the form of pure liquidity shortfall and an inability by a country to roll over its short-term liabilities. These symptoms were seen in Mexico crisis in 1994-95 and in several Asian countries with high private external liabilities in 1997.

4.3. Euro Crisis and Global Financial Integration

Despite the outbreak of the global financial crisis in August 2007 and its enlargement in September 2008 with the downfall of Lehman Brothers, the Euro region had been comparatively safe from the effect of the crisis (Jonung and Drea, 2009).[98] The euro had promoted trade and financial integration among the member nations. The number of member nations had increased up to 18 in the euro currency zone. However, in 2009, the Greece shock was unfolding and by the end of the year, it became visible as a full-blown financial crisis (Provopoulos, 2014).[99] In the initial years, the euro crisis broadened and deepened, challenging the sustainability of financial integration of the European Union. The Greece spill over was followed by Ireland, Spain, Portugal and Cyprus which evolved into the sovereign debt crisis.[100]

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[97] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, 'What Caused the Asian Currency and Financial Crisis? Part I: A Macroeconomic Overview' (n 90) 16.

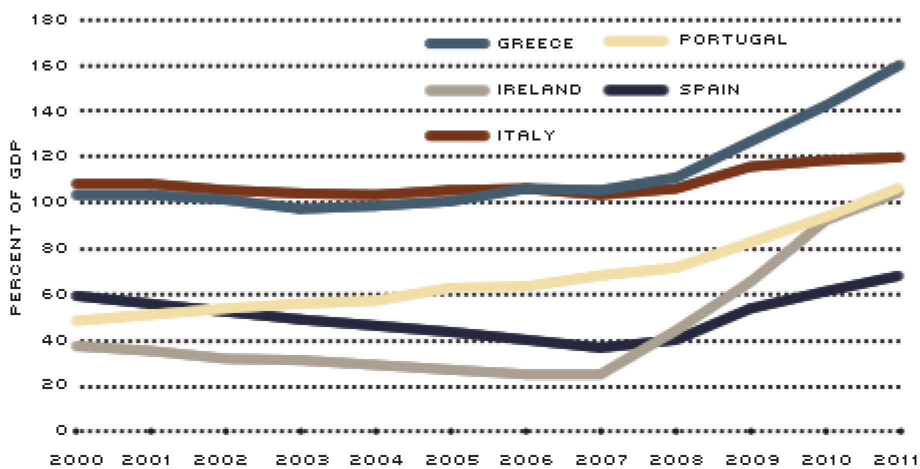
[98] Lars Jonung and Eoin Drea, *The euro - It can't happen, it's a bad idea, it won't last: US economists on the EMU, 1989-2002* (European economy. Economic papers no. 395, European Commission, Directorate-General for Economic and Financial Affairs 2009) 1.

[99] George A. Provopoulos, 'The Greek Economy and Banking System: Recent Developments and the Way Forward' (2014) 39 Journal of Macroeconomics , 240.

[100] Ricardo Correa and Horacio Sapriza, 'Sovereign Debt Crises' [2014] International Finance Discussion Papers No 1104 , 3 <http://www.federalreserve.gov/pubs/ifdp/2014/1104/ifdp1104.pdf> accessed 28-Feb-16.

The policy makers were of the opinion that EU will not be majorly affected because of the asymmetric shocks. The free movement of labour, capital, and product market were expected to adjust automatically (Fernández-Villaverde, Garicano & Santos, 2013).[101] However, the Eurozone nations operated with high debt for decades. Greece's unsteady financial status and high nation's debt were exposed only in 2009. Between 2000 and 2010, the debt-to-GDP ratio of Greece, Ireland, Italy, Portugal, and Spain went up to 100 percent and further increased from 2010 onwards (See, Figure IX.).[102]

Figure IX : GIIPS : Gross Government Debt to GDP Ratios : 2000 to 2011[103]



Source: International Monetary Fund, World Economic Outlook database, April 2012. The Greek and Irish shocks in the late 2000s woke up markets to the specter of sovereign debt, with debt-to-GDP ratios becoming alarmingly high.

After the Greece and Ireland crash, the financial markets stopped viewing Italy, Ireland, Greece, Portugal, and Spain debt as close substitutes for German bonds, and their interest rose to compensate for the heightened risk of default as reflected by increased in the yield

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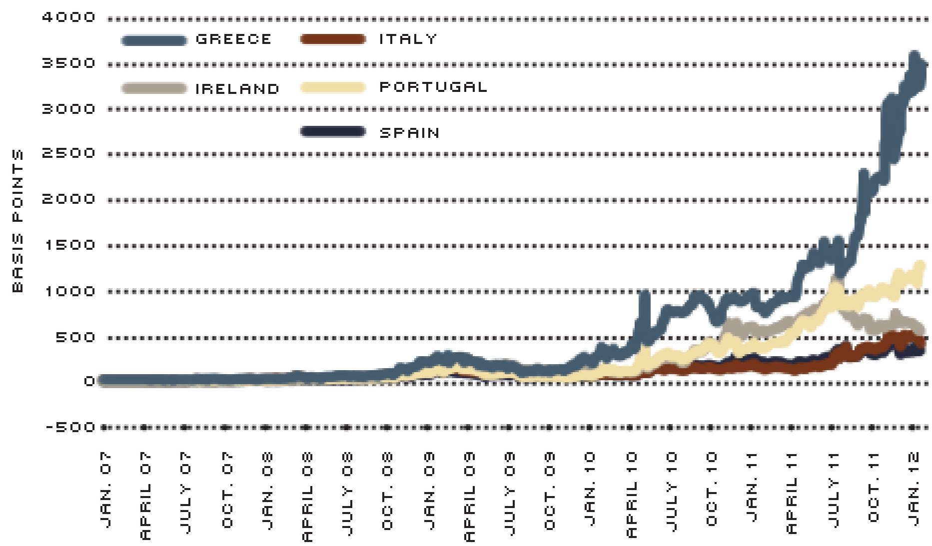
[101] Jesus Fernandez-Villaverde, Luis Garicano, Tano Santos, 'Political Credit Cycles: The Case of the Euro Zone' [2013] National Bureau of Economic Research, Working Paper 18899 , 1 <http://www.nber.org/papers/w18899> accessed 28-Feb-16.

[102] Federal Reserve Bank of St. Louis, 'The Sovereign Debt Crisis: A Modern Greek Tragedy' <https://www.stlouisfed.org/publications/central-banker/summer-2012/the-sovereign-debt-crisis-a-modern-greek-tragedy> accessed 28-Feb-16.

[103] Ibid.

spread between German-Greek debt by 3,300 basis points in 2012. (As reflected in Figure X.).

Figure X[104] Yield Spreads Over German 10-Year Bonds



Source: Reuters/Haver Analytics. Once the deteriorating fiscal condition of Greece and Ireland became well-known, the markets began to incorporate default risk into the interest rates charged to governments to roll over their debt.

4.3.1. European Sovereign Debt Crisis

The Euro region experienced large and growing current-account deficits in the years leading up to the crisis (Holinski, Kool & Muysken, 2012).[105] There was a belief that the current account deficit, in member nations, would not be a major concern for monetary and financial integrated union (Blanchard & Giavazzi, 2002).[106] The countries like Greece, Ireland, Portugal and Spain, with relatively low per capita income, had attracted capital inflows, because of high productivity growth and relatively high rates of return. This increased current account imbalance with huge volumes. Greece's current-account deficit

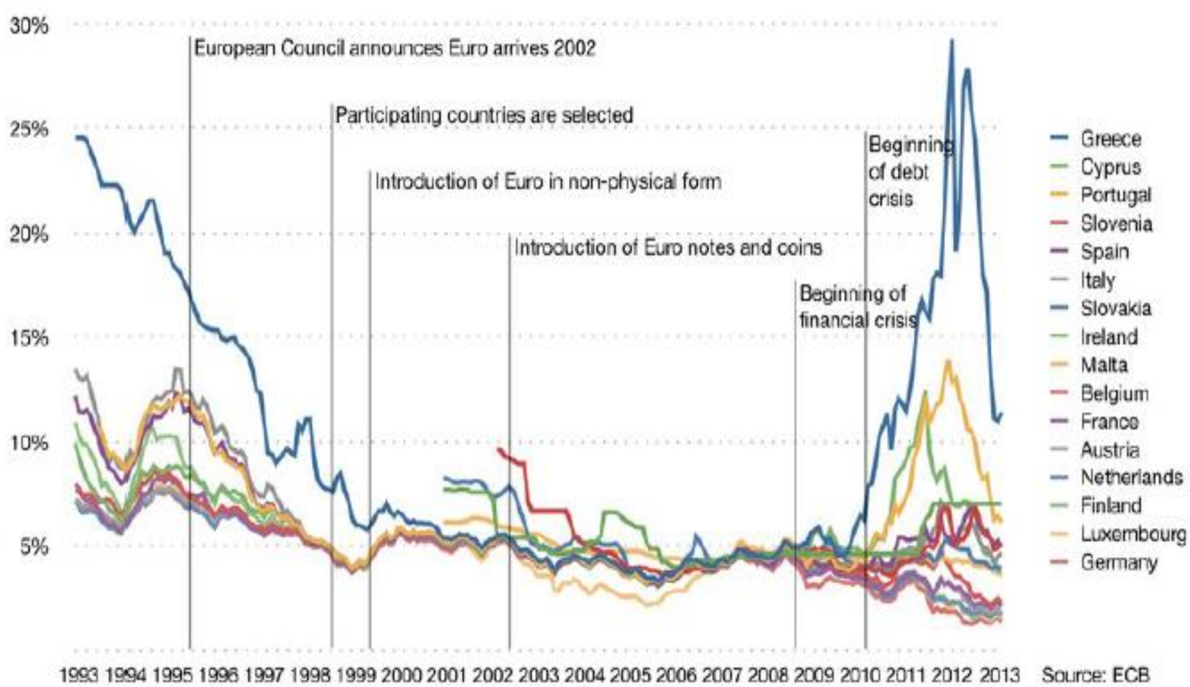
[104] Ibid.

[105] Nils Holinski, Clemens Kool and and Joan Muysken, 'Persistent Macroeconomic Imbalances in the Euro Area: Causes and Consequences' (2012) 94(1) Federal Reserve Bank of St Louis Review , 1 <https://research.stlouisfed.org/publications/review/12/01/1-20Holinski.pdf> accessed 28-Feb-16.

[106] Olivier J. Blanchard and Francesco Giavazzi, 'Current Account Deficits in the Euro Area. The End of the Feldstein Horioka Puzzle?' (2002) 33(2) Brookings Papers on Economic Activity , 147 <http://www.brookings.edu/~/media/Projects/BPEA/Fall-2002/2002b_bpea_blanchard.PDF> accessed 28-Feb-16.

swelled from 11.5 % of GDP in 2001 to 18 % in 2008.[107] The country's large current-account deficit signaled a competitiveness problem, i.e. capital continued to flow into the country until 2008-09, pushing up money and credit growth, which, in turn, increased inflation and increased external instability. In the period of 2001-09, annual money growth (M3) averaged 8.8 % in Greece, credit to private sector increased to 16.7 % a year and current account averaged at 13.4 % a year. Whereas Germany's current account was in surplus of 4.4 %, M3 growth averaged 5.7 % per year, and credit growth to private sector averaged 2.7 % in the period of 2001-09. However, both countries' shared a common currency and the appreciation of Greece's real exchange rate relative to that of Germany was entirely on account of the movement in relative prices.

Figure XI: Secondary market yields of government bonds with maturity of 10 years

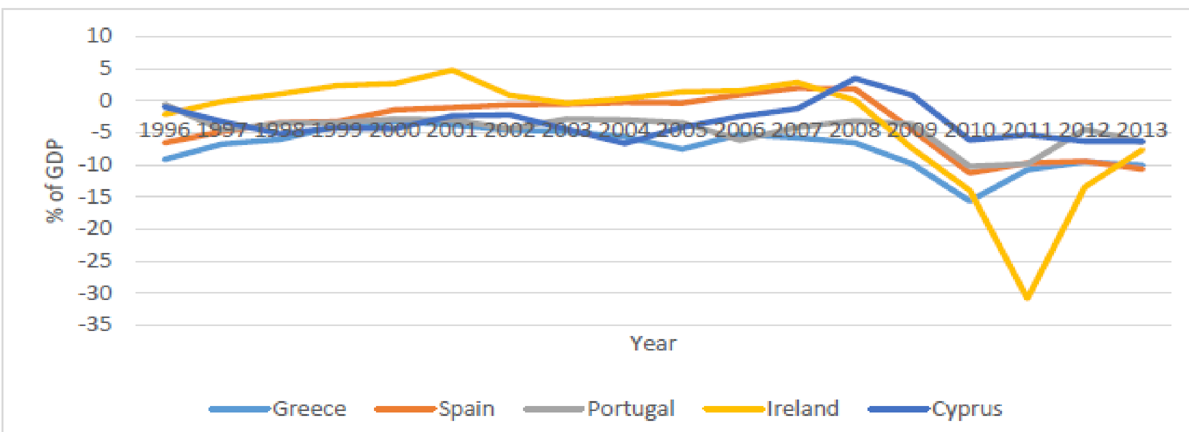


[107] George A. Provopoulos (n 99)

- **Greek crisis:**

The size of Greek government debt market doubled from 151.9 euro billion in 2001 to 299.7 billion in 2009[108]. In 2009, Greece had the highest debt in the EU at 126.8% of GDP. Economists predict that Greece's debt will continue to rise through at least 2015. As of April 2012, Greece's debt was approximately 127.8% of GDP.[109] The debt bubble was exposed and that led to a sudden stop in foreign flow resulting in the beginning of the Greek sovereign debt crisis.[110] The wrong prices of sovereign flows made it more difficult to distinguish those euro countries that were performing well and those countries that were performing poorly.[111] The euro turmoil has been foremost a banking crisis where bank failures have led to negative feedback loops between the poor banking system and good assurance from the sovereign. Greece's industries were hit badly and increased government spending increased the government debt and budget deficit. Standard and Poor's downgraded Greece's credit rating.

Figure XII.A : Budget Deficit as % of GDP

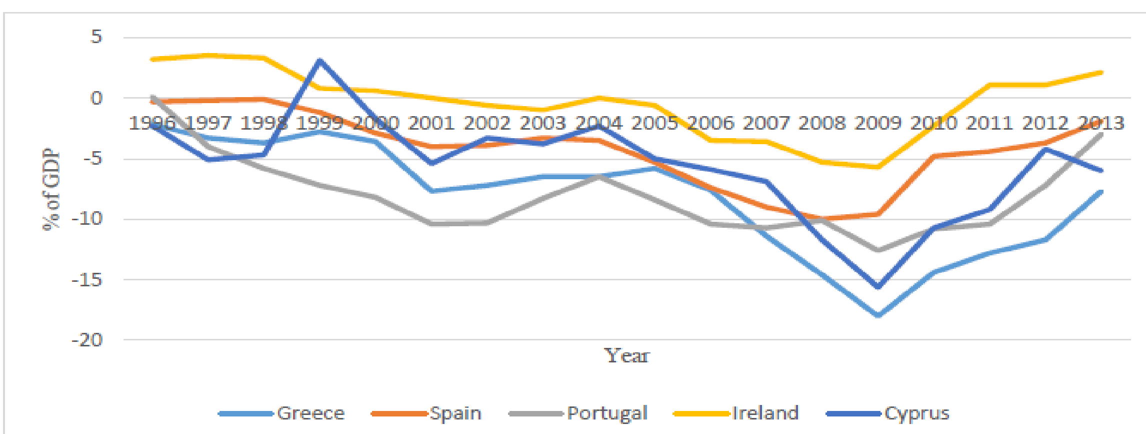


[108] Harris Dellas and George S. Tavlas, 'The gold standard, the euro, and the origins of the Greek sovereign debt crisis' (2013) 33(3) Cato Journal , 491 <http://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2013/9/cjv33n3-13.pdf> accessed 28-Feb-16.
[109] Kang H. Park, 'Lessons and Implications from the European Sovereign Debt Crisis' (2015) 3(3) JFE , 74 <http://www.todayscience.org/JFE/article/jfe.v3i3p72.pdf> accessed 28-Feb-16
[110] Heather D. Gibson, Theodore Palivos, and George S. Tavlas, 'The Crisis in the Euro Area: An Analytic Overview.' (23 May 2013, Bank of Greece, Economic Research Department). Conference paper : The crisis in the euro area, 1-20.
[111] Jesus Fernandez-Villaverde, Luis Garicano, Tano Santos, 'Political Credit Cycles: The Case of the Euro Zone' [2013] National Bureau of Economic Research, Working Paper 18899 ,1 <http://www.nber.org/papers/w18899> accessed 28-Feb-16.

- **Ireland Crisis**

The Ireland crisis was based on the property bubble crash. The homeowners and property developers defaulted on the loan in the real-estate crash. Ireland crisis resulted in problems in the real economy where unemployment increased up to 14% in 2010 and budget deficit increased up to 32% of GDP.[112] In 2011, Moody's downgraded the bank's debt to BB+. The government issued guarantees to six main Irish banks to control the situation. The government created the National Asset Management Agency (NAMA) to purchase bad loans from banks at discounted prices. NAMA was intended to stabilize the financial system by removing high risk loans of banks from their balance sheets. The government borrowed to finance its rescue of the banking sector, which caused its sovereign debt to rise from 24.4% of GDP in 2007 to 59.4% of GDP in 2009. By 2010, it was clear that the Irish government could not cover the losses in the banking sector. As the economic situation worsened in Ireland, investors lost confidence in Ireland's ability to repay its debts, and the government was no longer able to issue bonds in the international market to raise funds. Ireland, therefore, sought a bailout package from the EU and IMF in November 2010 where it accepted a three-year bailout package of €85 billion to help them with government funding and the rescue of failing banks.[113]

Figure XII.B : Trade Deficit as % of GDP

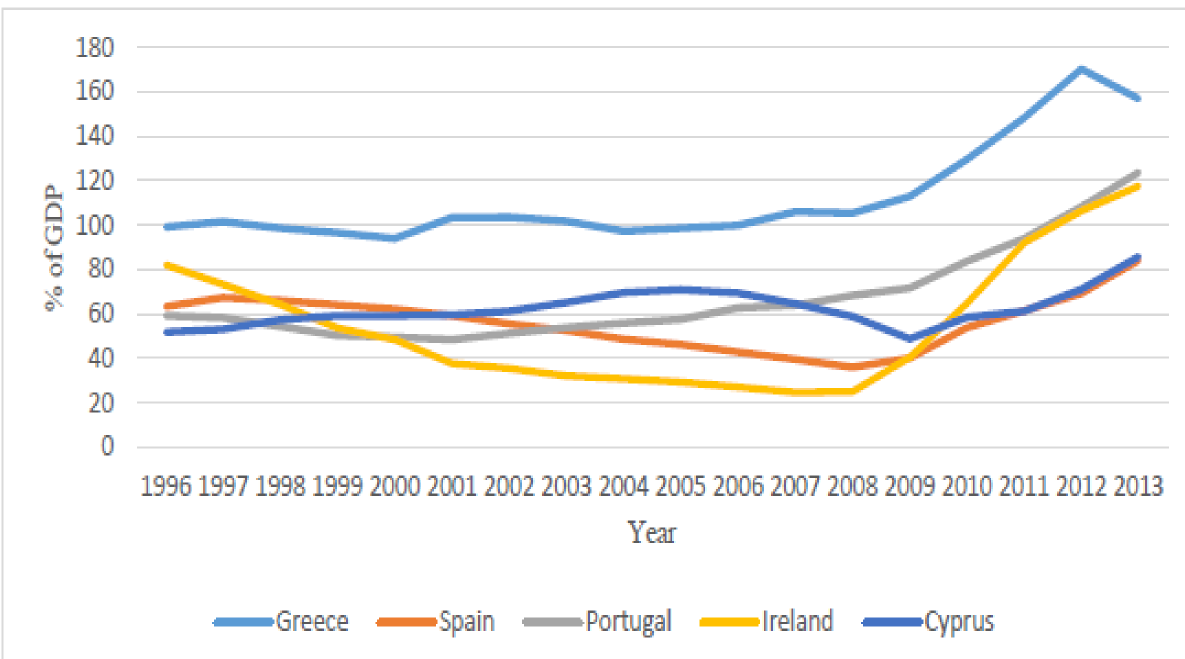


[112] Kang H. Park (n 109) 76.
[113] Ibid. 75-76

- **Portugal Crisis:**

Portugal has had the lowest growth in the Eurozone and suffered from low productivity and competitiveness. Between 2001 and 2007, Portugal experienced only 1.1% average annual growth. While Portugal's deficit was under 3% between 2002 and 2004, it rose to 5.9% in 2005 and reached a high of 10.1% of GDP in 2009. This increase resulted in an 11% drop in tax revenue due to the economic slowdown caused by the global financial crisis. With less revenue, the government had to rely on borrowed funds to finance. In 2010, Portugal's debt was 93% of GDP and was projected to increase to 97.3% of GDP in 2011. Moody downgraded Portugal to junk status due to its belief that the bailout would not be enough to stabilize Portugal's economy. Standard & Poor's and Fitch's Ratings have since done the same.

Figure XII.C: Sovereign Debt as % of GDP



- **Spain Crisis:**

In 2007, Spain's deficit was 1.132% of its GDP compared to the Eurozone which averaged of 1.83%. By 2008, Spain's deficit had risen to 4.9% of GDP and further increased to 9.7% of GDP in 2010. Between 1995 and 2007, a construction boom fueled remarkable economic growth as housing prices rose by 220%. Unemployment fell from 23% in 1986 to 8% in mid-2007. The availability of cheap credit from international lenders to banks and other lending institutions like the Cajas de ahorros (Spain's savings and loan banks) allowed Spanish households and businesses to borrow heavily to finance real estate purchases. Like other countries in the Eurozone, Spain benefitted from the low-interest rates available to Eurozone members. As a result, Spain turned from a country relying on virtually no external funding in 1996 to one that relied heavily on international lenders in the 2000s. By 2008, Spain had borrowed the equivalent of 9.1% of its GDP.[114]

In 2007, housing prices began to drop because the property was overvalued. Unemployment subsequently rose as jobs in construction disappeared. As the housing market slowed, lenders issued loans to home buyers that posed risks of default. As a result of growing unemployment (which rose to over 20%), many people could not afford to make their mortgage payments. Developers also began to default on their loans as the demand for new construction dropped, so banks ended up holding bad loans from both individuals and businesses. As bad loans increased, Spanish lenders' revenue fell to the point that they lacked the funds to pay their own foreign lenders. The government eventually stepped in to rescue the banking sector. It first selectively targeted the most indebted banks, but it soon provided funds to the entire banking industry, including €99 billion to recapitalize the Cajas. It feared that without more robust stimulus measures to help the banking sector, the country risked a financial collapse and recession. As government spending increased, so too did the deficit. The government had a budget surplus of 1.9% of GDP in 2007, but by 2009, it had a deficit of 11.2% of GDP. Consequently, its debt rose from 26.52% of GDP in 2007 to 43.73% of GDP by 2009. As of April 2012, Spain owed approximately €614 billion or 61.1% of GDP. When Spain real-

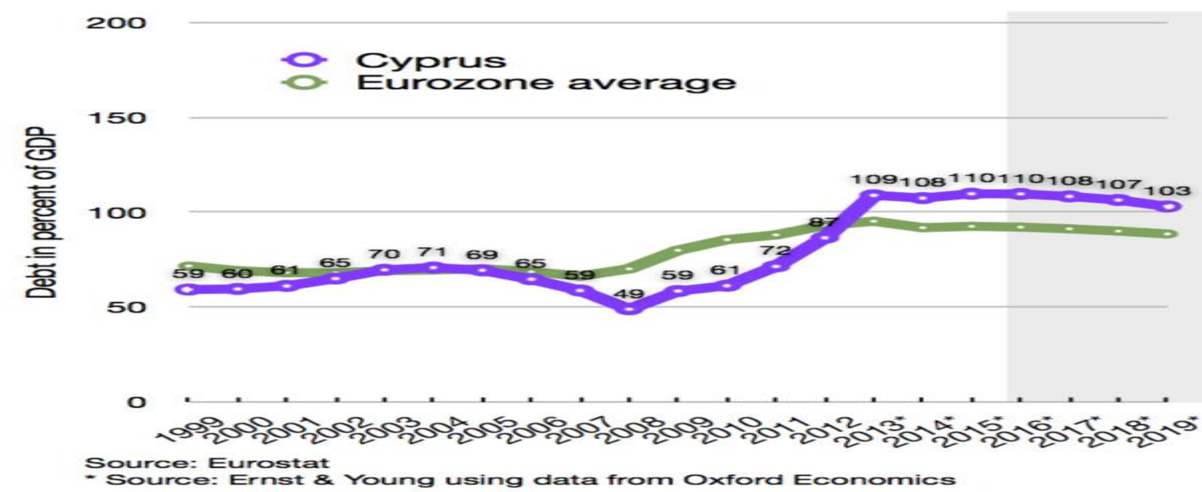
[114] Ibid. 78.

estate bubble burst, it had already spent huge funds to protect bankruptcy. The bank bailouts, high budget deficit and external debt led to a a downgraded rating of Spain.[115]

- **Cyprus Crisis**

Cyprus was affected due to Greek debt haircut and the declaration of the Cypriot economy into junk status by international rating agencies and lack of ability of the government to refund its state expenses. The Cypriot debt-to-GDP ratio is forecasted only to peak at 110% in 2015 and subsequently decline to 103% in 2020.[116]

Figure XIII : Cyprus percentage Debt of GDP



4.4. Comparative study of Global financial crisis with Euro Crisis and Asian Financial Crisis

These three crises were unique in their own characteristics. The GFC crisis contagion effect spread due to cross-border investment of toxic assets, whereas Asian Crisis spread due to the fact that long-term projects were financed by short-term foreign capital inflow and money market bubble was over and above real economic performance which was

[115] Ibid.

[116] European Union, 'European Economy: The economic adjustment programme for Cyprus' (Brussels, Belgium 2013). Occasional Papers 149, 55 <http://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp149_en.pdf> accessed 28-Feb-16.

characteristic of the burst in the near future. The Euro crisis happened because of high level of integration of their financial sector with rest of the world. Though the Euro economy said to be established on the principle of sound macroeconomic prudential norms like low budget deficit or fiscal deficit, price stability, competitive market, the right to private property etc., yet in practice the Euro nation went against the above mentioned principle of sound internal market. Because of this PIIGS nation's sovereign debt was very high and over and above their real economic performance which eventually resulted in the Euro crisis.

In GFC, during the booming period, the financial intermediaries like pension funds, mutual funds, insurance sectors, hedge funds, investment banks, non-financial companies[117] etc. were net gainers in the sub-prime mortgage securities market. This domino effect[118] inspired other investors to invest in this market.[119] This led to an increase in the size of the bubble in the financial system. The good performance of the financial market and increased demand for real products and services gave the signal to the real economy to increase their production and output. Also, producer expectation of good prospective profit increased their scale of production. The calculation of expected profit was an illusion, and ultimately all the sectors fell into a great trap. The net gainers were speculators who were using inside information to create a trap. In this domino effect, the cross-border participants also fell into this trap, and the losses gradually spread to the whole world.[120] Similar situation emerged in the Asian crisis where the capital account was made convertible without fulfilling essential safeguards. The Asian Economic experience also had not understood the difference between real economic performances over financial performance. In Euro crisis, from 2004 to 2007, euro economies were performing well and various big projects started in the PIIGS nation, in the hope that these investments will make their economy as strong as other leading Euro countries like Germany or France. However, when Germany and France defaulted, it led to unproductive sovereign debt and all the impacted Euro

[117] IMF, 'Global Financial Stability Report (GFSR) - Summary Version: Meeting New Challenges to Stability and Building a Safer System:' (April 2010). World Economic and Financial Surveys, 55.
[118] A domino effect or chain reaction is the cumulative effect produced when one event sets off a chain of similar events.
[119] Ibid.7.
[120] Satyendra Nayak, *The global financial crisis: Genesis, policy response and road ahead* (Springer 2013) 7; See also, Ibid. 69.

nations were engulfed in crisis and finally the rest of the world was impacted with severe consequences.[121]

The total bank assets as a share of euro-area GDP was much larger than in the United States, and this share amounted to almost 360% in the euro area, compared with less than 80% in the United States in 2012. The firms in the euro zone area were much more reliant on the banking system for finance than U.S. firms. Bank accounts amounted to three-quarters of total credit intermediation in the euro area, compared with about one-quarter in the United States. The domestic euro zone banks typically held relatively large shares of debt issued by their respective national government in their portfolios, leaving the banks' balance sheets vulnerable to doubts in times of sovereign insolvency. In comparison, US banks typically hold small amounts of local and state debts on their balance sheets which are US government debt as their "safe liquid assets" (O' Rourke & Taylor, 2013).[122] The European Central Bank' treated all euro zone sovereign debt on an equal basis, which led to low-interest rates and lending booms in the crisis-ridden countries (Honkapohja, 2014).[123] This means that eurozone lacked a common banking supervisor or authority and a member states retain responsibility for banking supervision, bank resolution and deposit guarantees in their respective jurisdictions.[124] The recognition that the foregoing factors have played important roles in the euro-area crisis has led to efforts to build a banking union so that the negative feedback loops between banking fragility and sovereign weakness can be broken (Goodhart, 2014).[125] The ECB does not have the mandate to act as a lender-of-last-resort to the governments. Without a central bank backstop, euro-area sovereign debt cannot guarantee bondholders that the sovereign will always have the necessary liquidity to repay their bonds at maturity. In contrast, nations that have their own

[121] Van-Den-Bogaert, 'The law of the European union an introduction, "Euro Crisis" week -5' (Course era, April 2014)
[122] Kevin H. O'Rourke and Alan M. Taylor, 'Cross of Euros' (2013) 27(3) Journal of Economic Perspectives, 167.
[123] Seppo Honkapohja, 'The Euro Area Crisis: A View from the North' (2014) 39 Journal of Macroeconomics, 260.
[124] Jean Pisani-Ferry, 'The known unknowns and unknown unknowns of European Monetary Union' [2012] Bruegel Policy Contribution, 1 <http://bruegel.org/wp-content/uploads/imported/publications/pc_2012_18.pdf> accessed 28-Feb-16.
[125] C.A.E. Goodhart, 'Lessons for Monetary Policy from the Euro-Area Crisis' (2014) 39, Part B, Journal of Macroeconomics, 378.

central bank to create the money, with no limit on the amount of money a central can create and function as a lender of last resort.[126] Effectively, euro-area governments issue debt in "foreign" currency, over which they have no control. This situation rendered both euro-area sovereigns and euro-area banks fragile since doubts about sovereigns' capacity to repay harmed the banking system.[127]

The Euro crisis became contagion in nature because to refinance their government debt, no assistance was available from ECB and IMF. Banks in the Euro currency area were undercapitalized and faced liquidity and debt problems. As per the Maastricht Treaty, the member nations ought to limit their deficit spending and debt levels. However, some weak Eurozone countries were unable to control their sovereign debt and financial balance sheet. Conversely, it grew in large volumes. The sovereign debt crisis was the result of the rising private and government debt level in some of the ineffective Euro countries, like Greece along with unproductive wage rate in the public sector and inefficient pension assurance, which further increased debt significantly. Most of the European banks own a high amount of sovereign debt, which caused trouble to the banking system on issues of solvency.

The current account deficit of more than 5% of GDP is perilous for the economy.[128] The countries with largest current account deficit imbalance were Thailand and Malaysia in 1997. The current account imbalance was one of the vital cause of the Asian Turmoil. The same case was reflected in the Euro crisis where PIIGS nation's current account deficit grew significantly. The US current deficit was also highest during GFC. The country was accumulating foreign debt at a rate that was faster than its real cost of borrowing, and this could not continue. A conventional 'test' of solvency in practical terms is a non-increasing foreign debt to GDP ratio. If the interest rate is higher than the growth rate in the real economy, then criteria of solvency can be operational by calculating 'resource balance gap' where the debt to GDP ratio is growing. This gap will be larger for countries with a large

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[126] Paul De Grauwe, 'Only the ECB can halt Eurozone contagion' *Financial Times* (3 August 2011) <http://www.ft.com/cms/s/0/4fd2a0c8-be10-11e0-ab9f-00144feabdc0.html#axzz39KX8ZSw7> accessed 29-Feb-16

[127] Paul De Grauwea and Yuemei Ji, 'How much Fiscal Discipline in a Monetary Union?' (2014) 39 Journal of Macroeconomics, 348.

[128] Giancarlo Corsetti, Paolo Pesenti, and Nouriel Roubini, 'What caused the Asian currency and financial crisis?' (n 90).

trade deficit to GDP ratio, a large debt to GDP ratio, signifying the differential between the real interest rate and the growth rate of the economy. In a theoretical sense, a large current account deficit is likely to sustain with high growth rate.[129] However, large current imbalance increase in long-run with slight reduction of growth rate of the economy.

The Euro crisis was a permutation of various dynamic and composite variables. The global financial integration had broken the boundary of credit to move freely to cross-border nations; easy credit conditions induced high-risk lending and borrowing practices. There was concern among lenders about significantly high sovereign debt, low growth rate and current account imbalance in poor performing eurozone countries like Greece, Ireland, and Portugal. This became an apparent problem for the area as a whole, leading to speculation of further contagion effects to other European countries.

The Asian Crisis, GFC, and Euro Crisis had many elements in its genesis common to other crises.[130] The common features were: Financially unsustainable and increased asset price model, high debt and credit booms, the build-up of marginal loans and systemic risk, global financial integration with the increased interconnectedness of financial markets, both nationally and internationally and the high degree of leverage (Gorton, 2009).[131]

In the Global financial crisis, particularly in the US, the boom in credit business was associated with sub-standard quality of lending such as sub-prime loans. This project was viable till housing market price was going up. The default of sub-prime loan started with the decline in housing price due to oversupply and burst in housing market which lead to further increase in the number of defaults which led to a reduction in the housing price. All this together resulted in the financial tsunami. This tsunami spread to cross-border countries like the European countries, emerging countries, and other developed countries. These countries also faced the similar problem of rapid expansion in mortgages which

[129] Steven Radelet, and Jeffrey Sachs, 'The Onset of the East Asian Financial Crisis' [1998] National Bureau of Economic Research, Working Paper 6680, 25.
[130] Charles W. Calomiris (n 34).
[131] Gary B. Gorton, 'Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007' [2009] SSRN (SSRN Electronic) <http://ssrn.com/abstract=1401882> accessed 29-Feb-16.

resulted in an increase in distress housing loan with a decline in housing price and deceleration in economic activity.[132]

5. Important Trends in Financial Crisis

5.1. In the real estate sector and more specifically, the house price rise, from 1997 onwards was a global occurrence where real house price index was rising continuously. The real house price index data reflects that France had the most extreme price rise from 1997 to 2008, followed by Spain and Italy, UK and the USA, but the trend was inverse in Germany where from 2009 onwards, real house price index declined. Whereas real GDP growth started to decline from 2007 onwards and growth rate got negative on 2009 and 2010 for all the specified countries. These were common characteristics before the crisis period. Easy monetary policy had been followed in all countries where real rate of interest was very low. Other features such as the depression in global bond yields, mispricing credit at the long end and making it easier for Greece to borrow globally at 28 basis points also contributed. Japan's zero-rate carry trade leaked massive amounts of liquidity into various part of the world. However, Global economy generated its own home-grown bubble when the global money supply grew at 11 to 15 %, and failed to meet its inflation target over a decade.[133]

[132] International Monetary Fund, 'Global Financail Stability Report: Containing systemic risks and restoring financial soundness' (Washington, DC April 2008). World economic and financial surveys, 1 <https://www.imf.org/external/pubs/ft/gfsr/2008/01/pdf/text.pdf> accessed 29-Feb-16.

[133] Amborse Evans-Pritchard, 'Reckless Europe beats reckless America at property bubbles – Telegraph Blogs' <http://blogs.telegraph.co.uk/finance/ambroseevans-pritchard/100007092/reckless-europe-beats-reckless-america-at-property-bubbles/> accessed 29-Feb-16.

Figure XIV.A: Real House Price Index (Germany, UK, USA, France, Itlay, and Spain) [134]

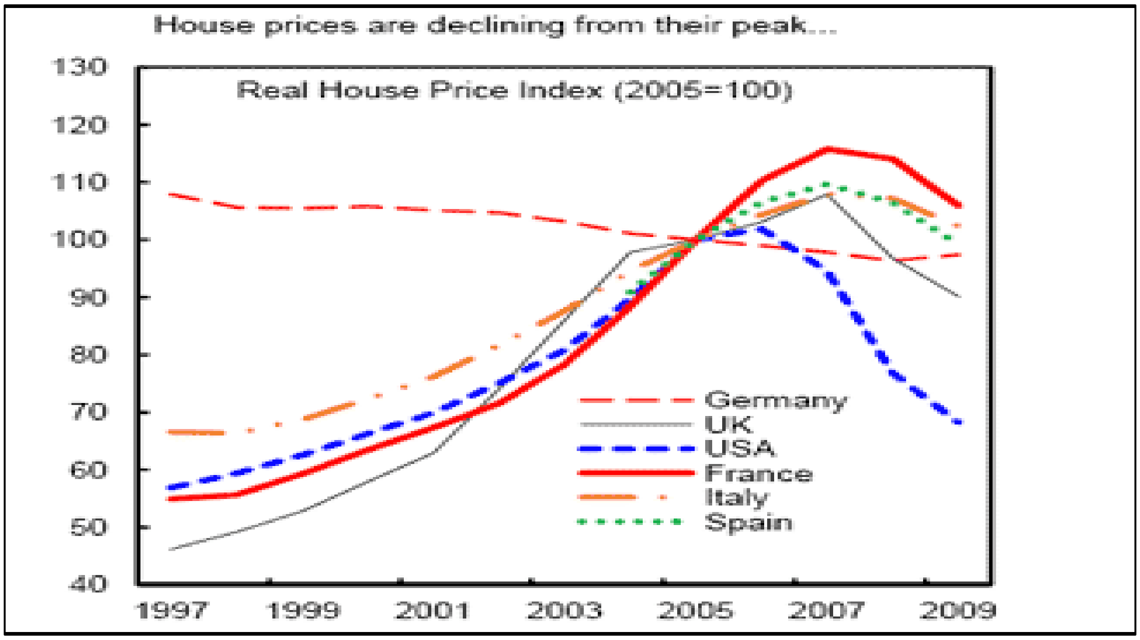
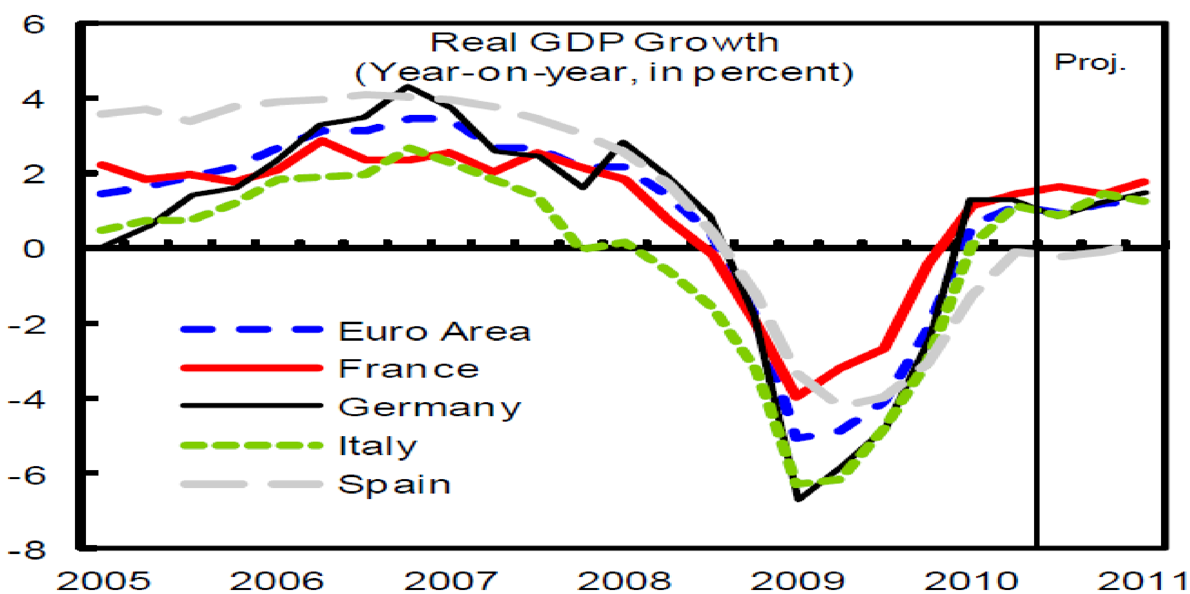


Figure XIV.B: Real GDP growth (in %)[135]



Sources: Global Insight/Data Insight; Haver Analytics; and IMF, World Economic Outlook, 2010

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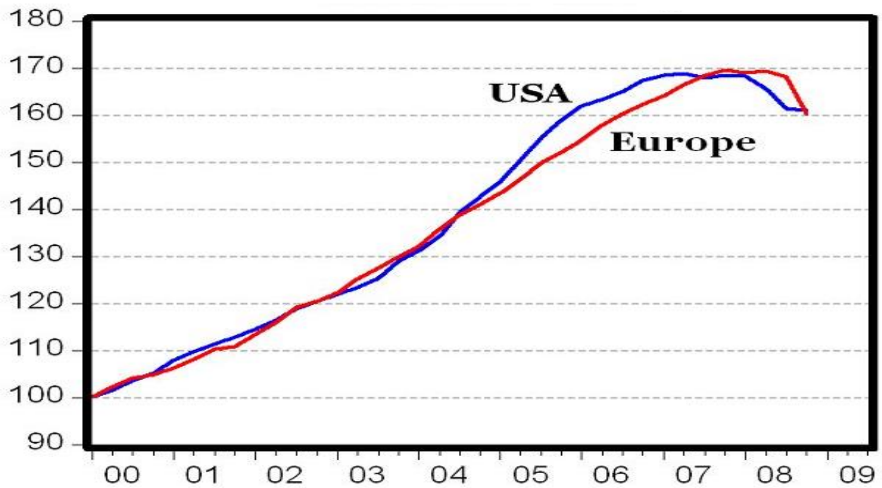
[134] Ibid.

[135] International Monetary Fund, 'France: 2010 Article IV Consultation: Staff Report; Staff Supplement; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for France' (July 2010). IMF Country Report No. 10/240 , 10 <https://www.imf.org/external/pubs/ft/scr/2010/cr10240.pdf> accessed 29-Feb-16.

5.2 A remarkably similar pattern of house prices is observed in the U.S. and Europe between 2000 and 2008. The U.S. house prices peaked several quarters ahead of Europe and started declining a few quarters ahead of Europe. Otherwise, the home price patterns are very similar.

Figure XIV.C: House Price Index: USA and Europe [136]

2000.1 to 2008.4



Source: Office of Federal Housing Enterprise Oversight (OFHEO)[137]

5.3. Data in Table C.1 provide some key formalized facts on the development of cross-border bank flows to emerging countries. The external positions of BIS reporting banks vis-à-vis emerging countries increased more than four times between 1990 and 2008. The expansion in cross-border financing was most pronounced in CEECs, where external positions and cross-border loans outstanding at the end of 2008 were 13 times higher than at the end of 1990. The exposures of BIS reporting banks in CEECs at the end of 2008 were roughly the same as those in emerging Asia, which is five times larger in terms of GDP compared to CEECs.

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[136] Mark J. Perry, 'CARPE DIEM: House Price Indexes: USA vs. Europe' (06 April, 2009) <http://mjperry.blogspot.in/2009/04/house-price-indexes-usa-vs-europe.html> accessed 29-Feb-16.

[137] The Housing and Economic Recovery Act of 2008 combined OFHEO and the Federal Housing Finance Board (FHFB) to form the new Federal Housing Finance Agency (FHFA).

Table C.1: Cross-border lending to emerging market economies (EMEs)[a]

Amounts outstanding (stock of loans) In billions of US$, end-of-period [138]

	To all EMEs	To emerging Asia	To Latin America	To CEECs
1990	406	165	191	50
1999	646	303	249	94
2008	1,695	679	351	666

Notes: a) External positions of banks from 17 advanced economies (BIS reporting countries) vis-à-vis all sectors (banks and the non-bank sector) in 28 emerging market countries.

Sources: BIS locational banking statistics

Table C.2 Cross-border lending to emerging market economies (EMEs)

Growth of cross-border lending Changes in percent[b]

	To all EMEs	To emerging Asia	To Latin America	To CEECs
1990–2008	9.3	11.3	3.5	17.4
1990–1999	5.9	10.6	1.7	9.3
2000–2008	13.2	12.0	5.5	26.5

Notes: b) Four-quarter percentage changes, period averages.

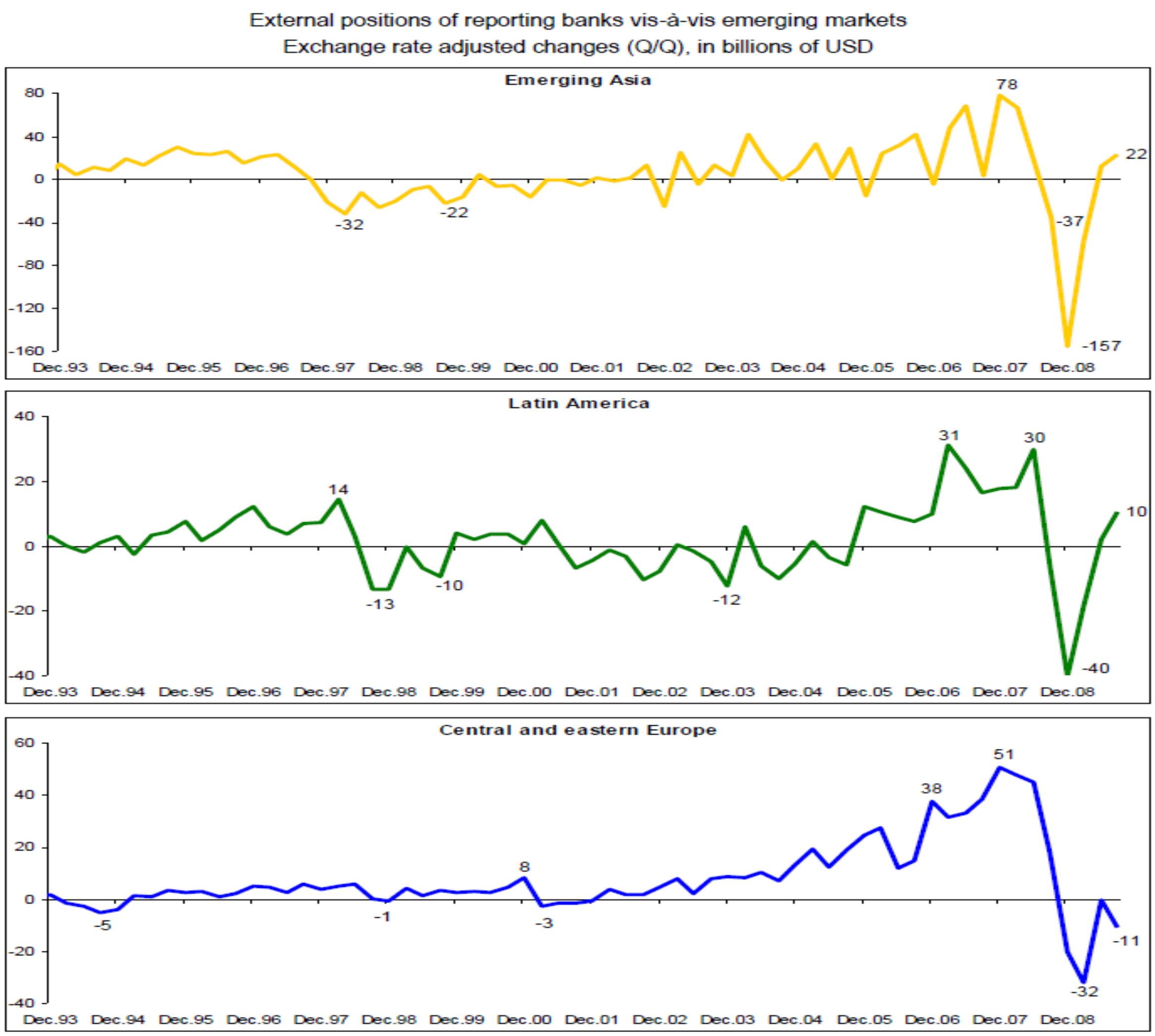
Sources: BIS locational banking statistics

Figure XV demonstrates that the cross-border financial flow changed across time. Among the two discrete crisis namely the Mexican crisis (1994-95) and the Asian crisis (1997-99), the Mexican crisis was short term and only Latin America was affected whereas consequence of the Asian Crisis on cross-border financial flows was much significant and it has continued for long-term. Indonesia, Korea, Malaysia, Philippines, and Thailand were hit the hardest with a long-lasting reduction in cross-border financial flows between mid-1997 and end-1999. The contagion effect of the Russian domestic debt crisis in 1998

[138] Sabine Herrmann and Dubravko Mihaljek, 'The determinants of cross-border bank flows to emerging markets: new empirical evidence on the spread of financial crises' [2010] BIS Working Papers No 315, Monetary and Economic Department , 4 <http://www.bis.org/publ/work315.pdf> accessed 29-Feb-16.

negatively impacted Latin America, but CEECs was less affected with the same. In the period of 1997 to 2000, capital flows were interrupted by irregular sharp reduction of flows mostly in Asia, Latin America, and CEECs region. From 2002 onwards, global financial integration and low international interest rate led the global financial sector to widen their operations in developing countries and LDCs,[139] and it increased the volume of cross-border financial flow market.[140]

Figure XV: External Position of reporting banks vis-à-vis emerging markets



Source: BIS, locational banking statistics.

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[139] Dubravko Mihaljek, 'The financial stability implications of increased capital flows for emerging market economies' [2008] BIS Working Papers No 44, Monetary and Economic Department , 11 <http://www.bis.org/publ/bppdf/bispap44b.pdf> accessed 29-Feb-16.

[140] Sabine Herrmann and Dubravko Mihaljek, 'The determinants of cross-border bank flows to emerging markets: new empirical evidence on the spread of financial crises' (n 138)

The external financial flow reached its peak in real terms in the period of 2007-08. The emerging Asia received a combined total of $78 billion, and Europe received $ 51 billion in Q4:2007; Latin America received a total of $30 billion in Q2:2008. Relative to GDP, the inflows were largest in CEE (10.8% in Q4:2007). In emerging Asia and Latin America, peak inflows exceeded 4% of GDP. With the collapse of Lehman Brothers in Q3:2008, major international banks started to decrease their financing of banks and the non-bank sector in almost all countries. The biggest decrease took place in the mid of 2008 and 2009 in emerging countries. From the third quarter of 2009, international banks, for the most part, resumed their lending to emerging countries.

6. Data Analysis and Trends based on GFI

6.1. Portfolio Investment, Equity (DRS, Current $S): 1994 to 2003 and 2004 to 2012

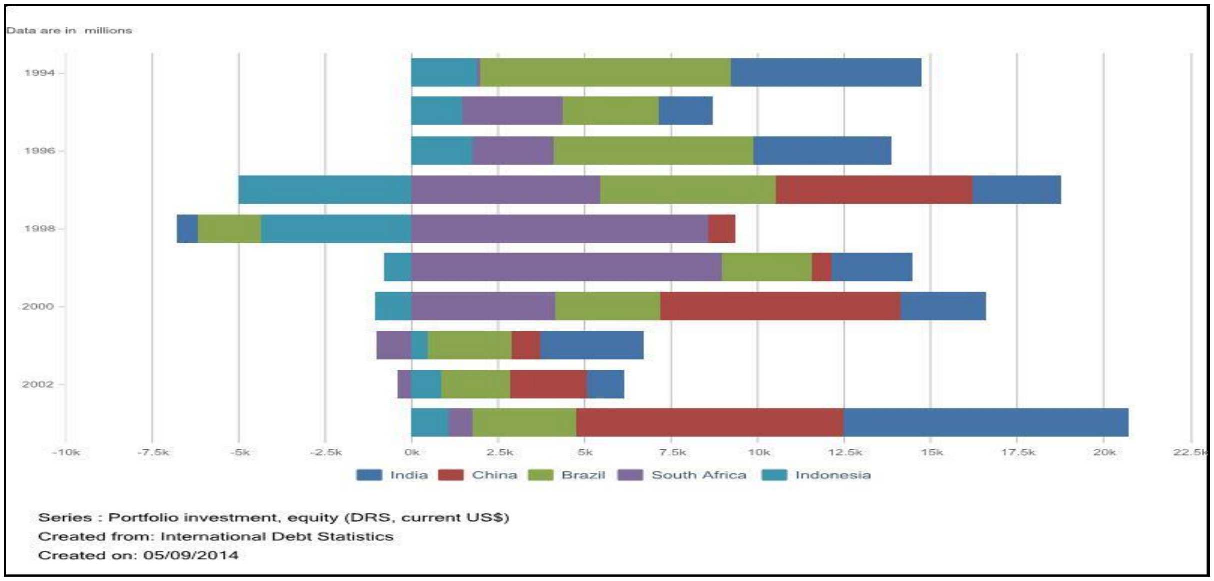
Emerging Countries: India, China, Brazil, South Africa and Indonesia

Time Period: 1994-2003 & 2004 to 2012

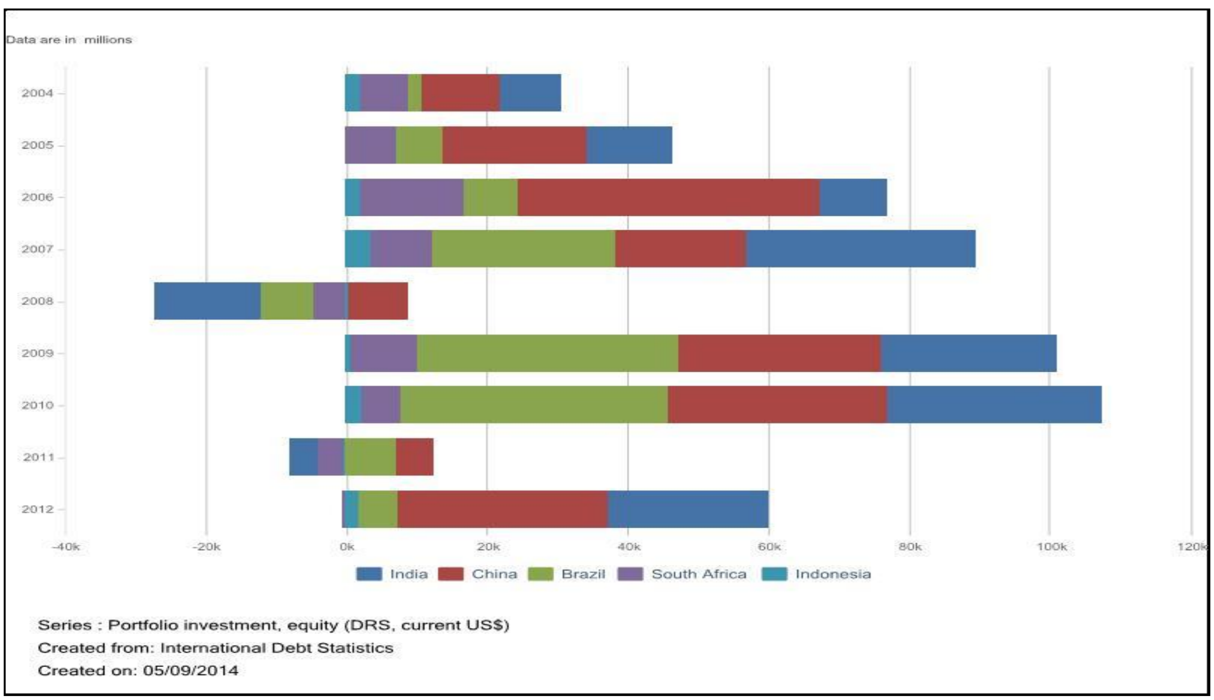
Source: World Data Bank. International Debt Statistics

Figure XVI : Portfolio Investment, Equity (DRS, Current $S) (Emerging Countries)

1994 to 2003



2004 to 2012



1994 to 2003:

Indonesia was severely affected in 1997-2000 due to contagion effect of Asian financial crisis (1997); its foreign portfolio investment was negative (1997-2000). The foreign portfolio investment was also negatively impacted in India, China, Brazil and South Africa. In the same period Argentina Crisis (1998-2002) affected Brazil sternly.

2004 to 2012:

The Global financial crisis (2007-10) affected India, China, Brazil, Indonesia and South Africa in 2008. The foreign portfolio inflow of the sample emerging countries slightly improved due to capital flight from the developed countries during 2009-10. In 2011 to 2012 period, portfolio investment declined (due to recovery in Developed countries). Foreign Direct Investment is purportedly more costly to reverse and less sensitive to global shocks. FDI flows tend to be more stable compared to alternatives (Lipsey, 1999).[141] The data do not suggest that FDI and FPI have an unmitigated, positive effect on economic growth. It appears that unfettered capital flows do not necessarily enhance growth (Durham, 2004).[142]

6.2. Foreign Direct Investment, net inflow (DRS, Current $S): 1994 to 2003 and 2004 to 2012

In both phases of the time period, FDI was less unstable compared to foreign portfolio investment, but it has reduced in the period of 1998, 1999 and 2009. FDI inflow was negative in Indonesia from 1998 to 2001 because it was going through a transitional period of crisis. FDI is a long-term investment and is based on long-term business. Narayan Sethi's (2007)[143] study stated the FDI is less effected as compared to FPI during crisis.

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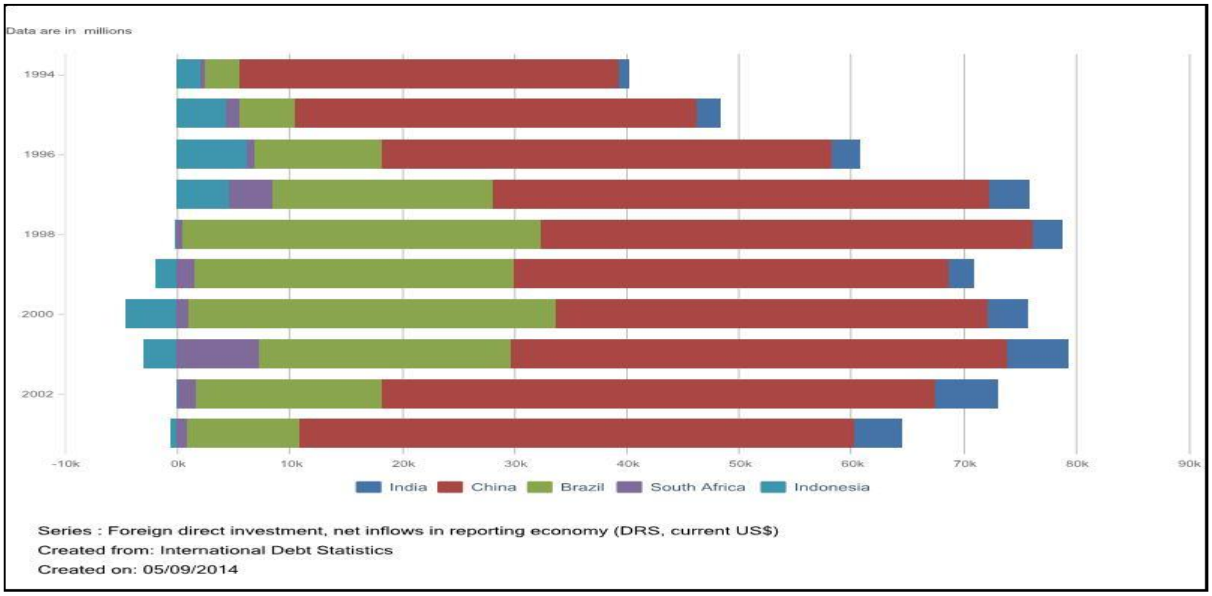
[141] Robert E. Lipsey, 'The Role of Foreign Direct Investment in International Capital Flows' [2000] National Bureau of Economic Research, Working Paper 7094 , 1

[142] J.Benson Durham, 'Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth' (2004) 48(2) European Economic Review , 285

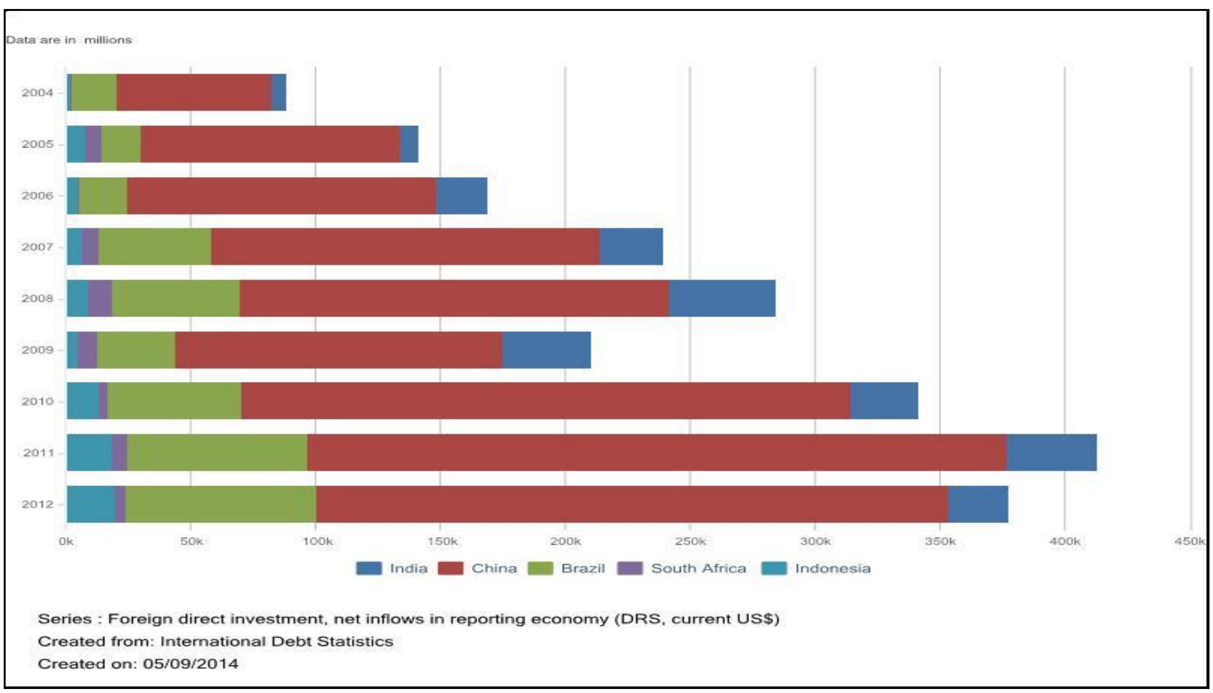
[143] Narayan Sethi, 'International Capital Flows and Growth in India: The Recent Experience' [2007] SSRN (SSRN Electronic) <http://ssrn.com/abstract=1010071> accessed 29-Feb-16

Figure XVII: Foreign Direct Investment, net inflow (DRS, Current $S) (Emerging Countries)

1994 to 2003



2004 to 2012



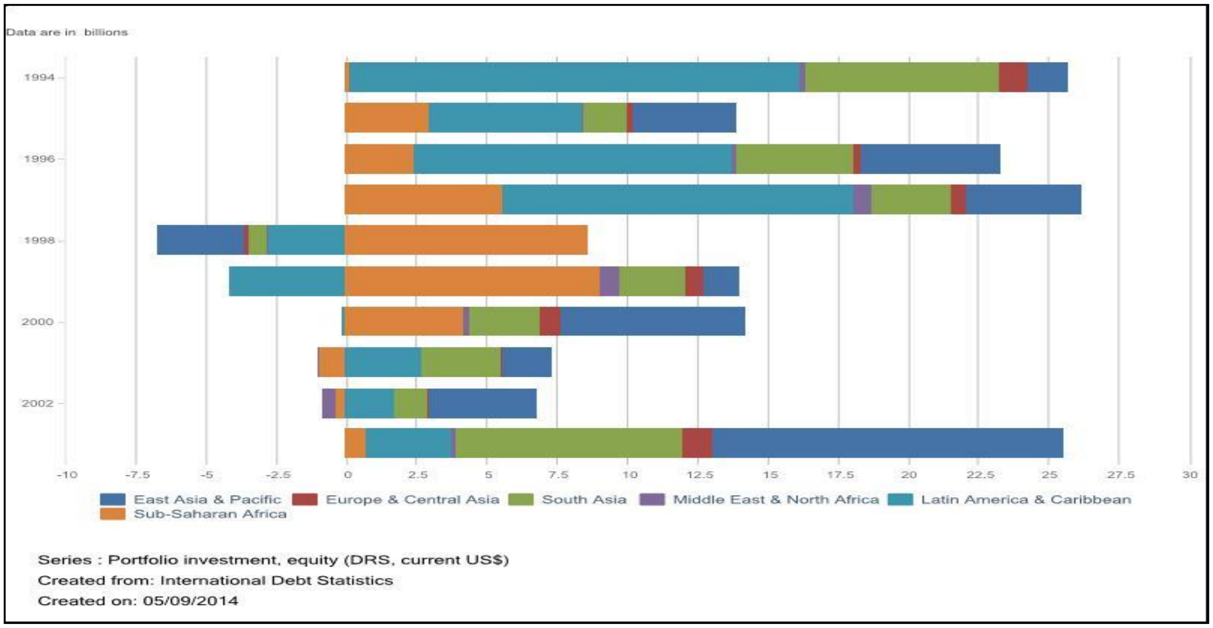
6.3. Portfolio Investment, Equity (DRS, Current $S): 1994 to 2003 and 2004 to 2012

Regions: East Asia and Pacific, Europe and Central Asia, Latin America & the Caribbean, Middle East & North Africa and South Asia

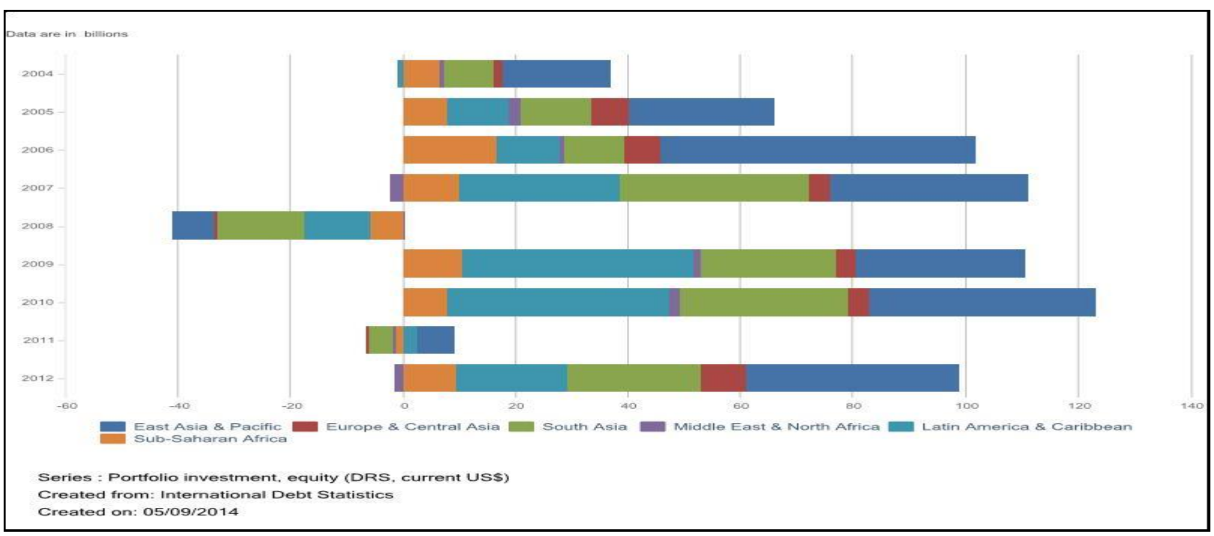
Source: World Data Bank. International Debt Statistics

Figure XVIII: Portfolio Investment, Equity (DRS, Current $S) (Regions)

1994 to 2003



2004 to 2012



From 1994 to 2002: The two major financial shocks (Asian Crisis and Argentina Crisis) had a significant impact on East Asia & Pacific and Latin America & Caribbean countries, South Asia, Europe & Central Asia were also affected. Sub-Saharan Africa was the net gainer regarding capital inflows during the period. It shows that financial crisis in the backdrop of GFI in the two regions provided the opportunity to invest in other alternative regions.[144]

From 2004 to 2012: The GFC had majorly impacted all regions: South Asia, Latin America & Caribbean, Sub-Saharan Africa, East Asia & Pacific and Europe & Central Asia in 2008. The crisis also recovered quickly compared to previous crisis. At the recovery stage, foreign portfolio investment increased significantly in South Asia and Latin America compared to other regions, in the period of 2009 to 2010. The global portfolio market shrank and impacted the entire region but more significantly to South Asia in 2011.

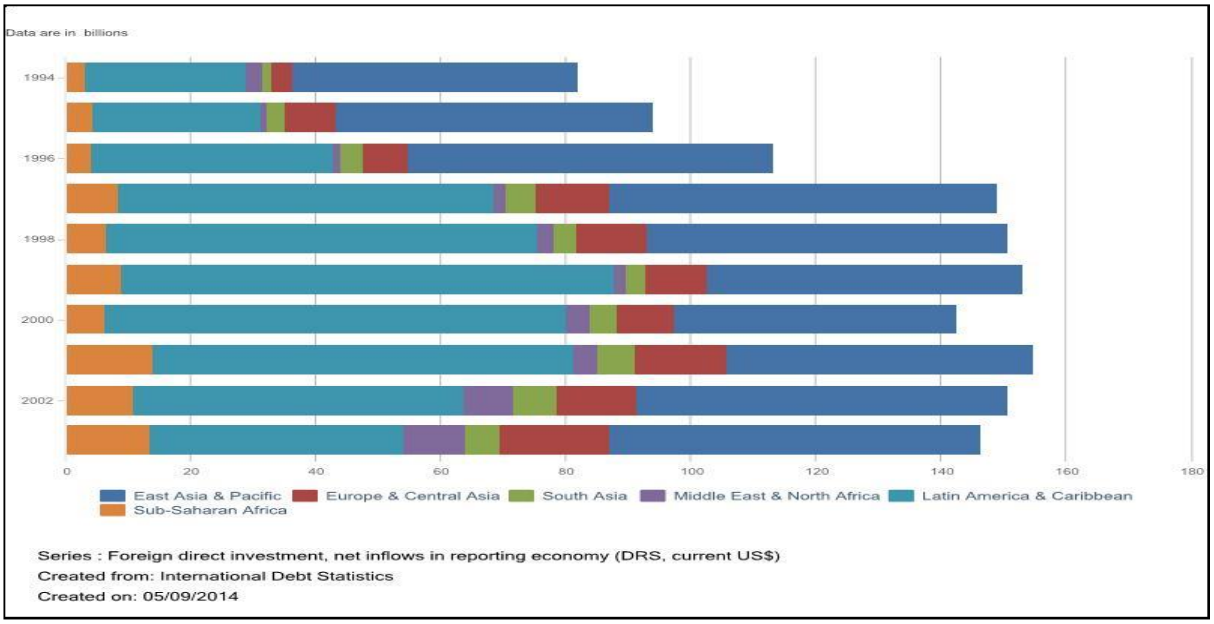
The Comparison of the high growth of East Asian countries with the poor performance of Latin American and Caribbean economies is given by the per capita growth rate.[145] The four East Asian Tigers: Hong Kong, Singapore, South Korea, and Taiwan grew at an average of over 6 percent a year in per capita terms between 1960 and 2000. In contrast, many countries in Latin America and the Caribbean recorded less than 1 percent growth during the same period. The net reduction of capital outflow was high in Latin American and Caribbean countries compared to East Asian countries.

[144] Jose De Gregorio, and Jong-Wha Lee, ‘Growth and Adjustment in East Asia and Latin America’ (2004) 5(1) Economía , 69 <http://muse.jhu.edu/journals/eco/summary/v005/5.1gregorio.html> accessed 29-Feb-16
[145] Ibid.

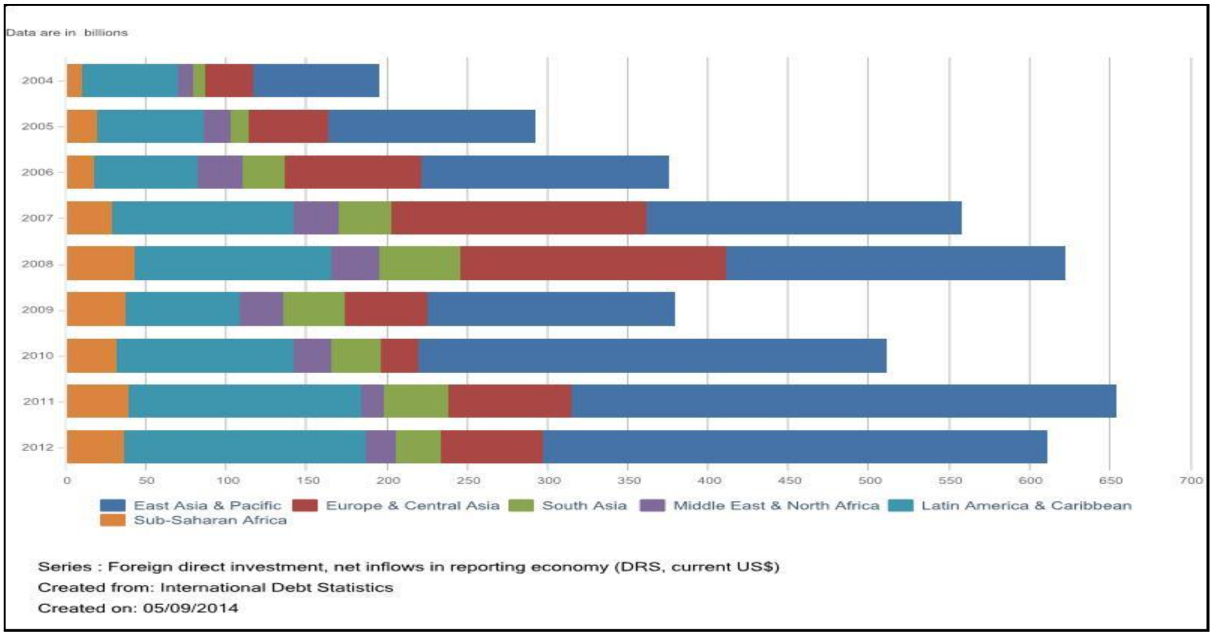
6.4. Foreign Direct Investment, net inflow (DRS, Current $S): 1994 to 2003 and 2004 to 2012

Figure XIX: Foreign Direct Investment, net inflow (DRS, Current $S) (Regions)

1994 to 2003



2004 to 2012



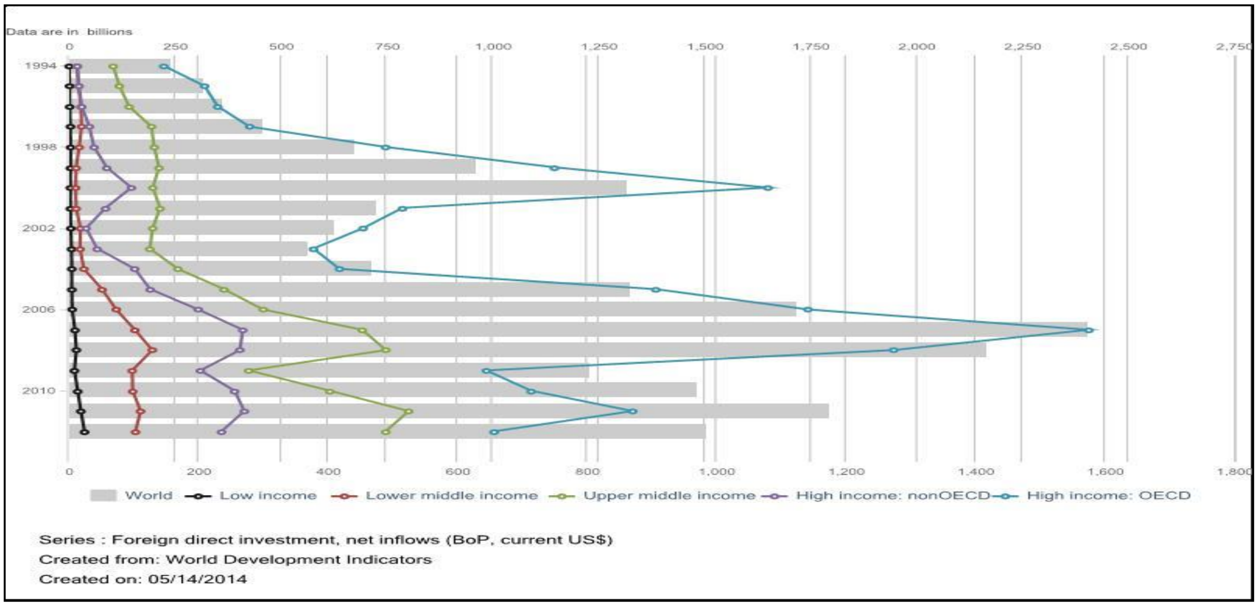
In both phases, FDI was less volatile in comparison to foreign portfolio investment in the financial crisis of Asia, Argentina, and Global financial crisis. FDI volume decreased in the period 2000 and 2009. However, the FDI was not effected in the proportion of short-term investment at the time of market failure, e.g. GFC, Asian Crisis, and Argentinean Crisis. The presumption is that the foreign direct investment is more stable than portfolio investment (Lipsey, 2001).[146] The developed countries were the worst affected by the financial crisis, their FDI inflow fell by 25% in 2008 in the context of the previous year, whereas FDI flows of developing and transition economies increased to 7% and 24% respectively. Developed countries are still the largest recipients of global FDI but their share fell from 69% in 2007 to 60% of the world FDI flows in 2008.[147] Liberalization of the capital account has invariably been associated with severe economic and financial crisis as experienced by Asia and Latin America in the 1990s.[148]

6.5. Region based on Income: Low Income, Lower middle income, Upper middle income, High income (non-OECD) and High income (OECD), World

[146] Robert E. Lipsey (n 141)
[147] United Nations, *Foreign direct investment in latin america and the caribbean 2015* (United Nations 2015) , Ch 1, Foreign direct investment and transnational corporations in Latin America and the Caribbean, 20.
[148] Ajit Singh, 'Capital Account Liberalization, Free Long-Term Capital Flows, Financial Crises and Economic Development' (2003) 29(2) Eastern Economic Journal , 191 <http://www.jstor.org/stable/40325410?seq=1#page_scan_tab_contents> accessed 29-Feb-16

Figure : XX.A : Foreign Direct Investment, net inflow (DRS, Current $S) (Region based on Income)

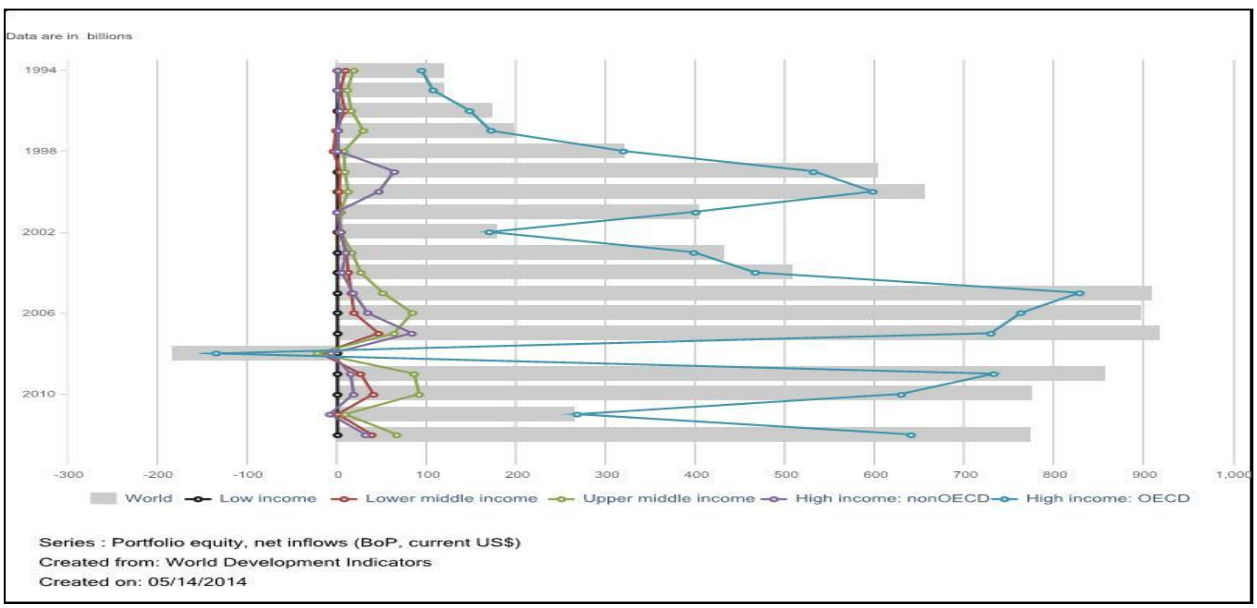
1994 to 2013



Source: World Data Bank. International Debt Statistics

Figure: XX.B Portfolio Investment, Equity (DRS, Current $S) (Region based on Income)

1994 to 2013



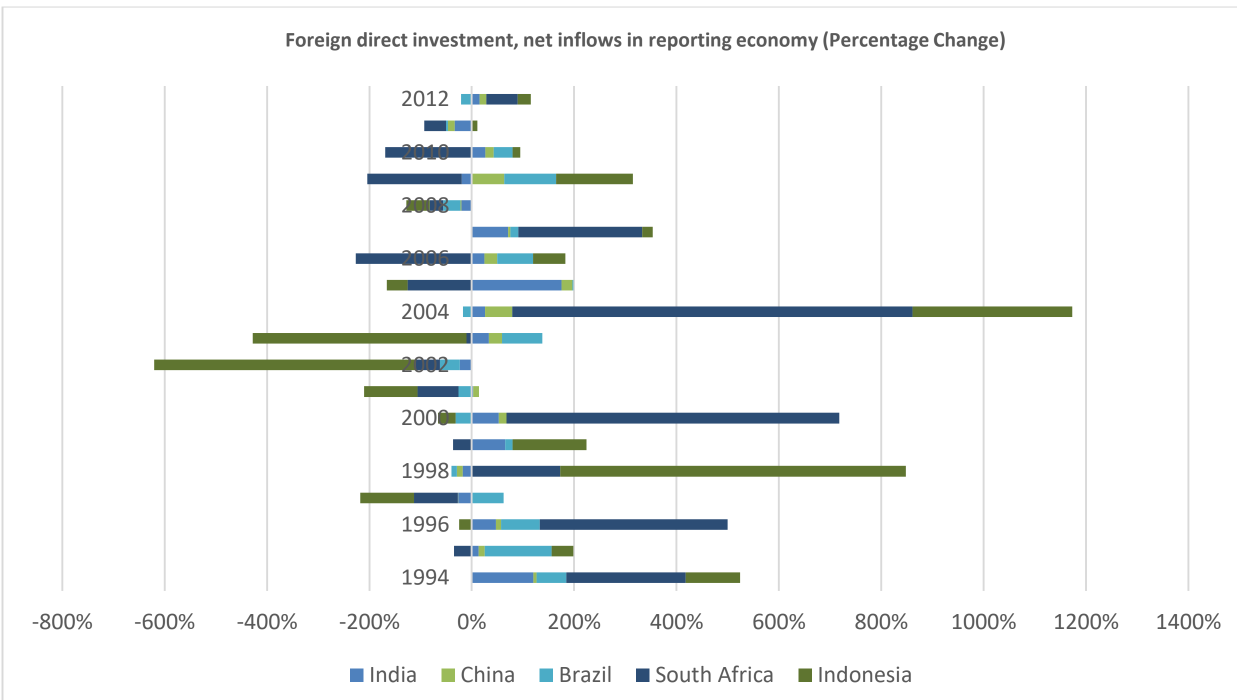
Source: World Data Bank. International Debt Statistics

FDI reduced in Low income, Lower middle income and High income regions in the period from 1998 to 2000 in the backdrop of Asian and Argentinean Crisis 1997, whereas in the period of 2008 to 2009, FDI has reduced in all income regions.

Portfolio equity, the net inflow reduced in Lower middle income and upper middle income countries in the period of 1998 to 1999, whereas it was volatile in the period 2007 to 2009 in all income regions.

6.6. Foreign Direct Investment, Net Inflows in reporting Economy (Percentage Change)

Figure: XXI. A: Foreign direct investment, net inflows in reporting economy (Percentage Change)



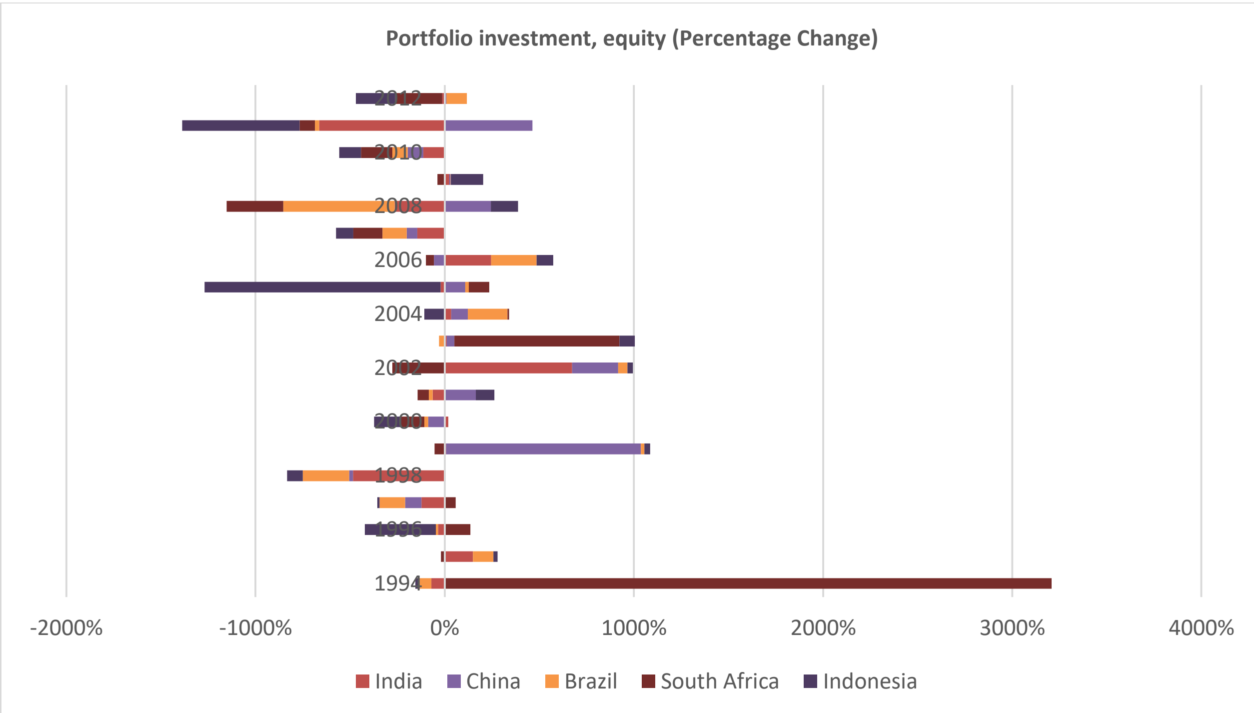
1994 to 2012

Foreign Direct Investment (Net Inflows) percentage was negative during 1997 and 2008 in the given sample developing countries. Otherwise, it was volatile from 1994 to 2012 period. The volatility was very high in Indonesia and South Africa, on account of endogenous or internal factors.

6.7. Portfolio investment, equity (Percentage Change)

Figure: XXI. B: Portfolio investment, equity (Percentage Change)

1994 to 2012



Portfolio investment, equity (Percentage Change) was negative during 1997, 1998, 2007, and 2010 in the given sample developing countries. Otherwise, it was volatile from 1994 to 2012 period.

7. Summary

The seeds of the global financial crisis were sown in the 1990's, when the emerging countries opened and integrated their economies, without fulfilling the prerequisites for global financial integration, resulting into a series of crisis in Asia, Latin America, and

Russia during the period from 1990's to 2000's. However, these crises were region specific. The global financial integration has increased rapidly after 2000's onwards. The international financial integration (IFI) magnified the crisis during times of financial shock. It was evident that those countries who had closer integration with the US financial system were immediately and severely affected.

The causes of GFC were asset price bubbles, credit boom, large-scale leverage, regulatory arbitrage in micro and macro prudential norms and global financial integration. Financial crisis spread due to contagion, herd-effect, and spillovers effect, where one country's crisis effect spread into the web to other countries. In the globalized world, each country is dependent on the others economy in one way or another, in such situations, a slight impact on the economy or state of "A" leads to change into the economy of "B" and subsequently to the macro economy of the whole world. Historical evidence has proved that these features have led to financial crashes, such as Denmark, Finland, Norway, and Sweden (1990/91), Mexico (1994), and Korea, Malaysia, Philippines, and Thailand (1997/98).

The GFC originated due to sub-prime mortgage asset crunch in 2007 and it launched a series of inter-connected events. Lehman Brother and Washington Mutual became the world's largest bankruptcy ever. The tsunami waves of this crisis moved around the world from California to Iceland, China and other parts of the world. The high degree of financial inter-connection was reflected in the large presence of foreign intermediaries in several financial systems. For example, the chaos rapidly spilled over in Germany (IKB Deutsche Industriebank and Sachsen LB July 2007), France (BNP Paribas's money market fund, August 2007) and to Switzerland's two largest banks (UBS and Credit Suisse, June 2008). In the UK, Northern Rock came under intense stress in 2007. Notably, low-interest rates and high-risk mortgage also impacted Iceland, Hungary, and the Baltic's where the imbalance was pronounced. The previous introspection of the East Asian Crisis, indicated that the financial distress stemmed in the official and banking sectors. Whereas the GFC was largely contributed by the household sector, particularly, mortgage loan market and was transmitted to the other sectors, i.e., from production sector to rest of the world economy, declining corporate profits and increasing unemployment, followed by adverse impact on growth and World GDP. The countries that followed were those having strong financial links with the epicenter (the US and the G 20 Countries). The emerging markets were affected due to the indirect effect of a decrease in global demand leading to decline in world trade, and ultimately global trade imbalance turned into an imbalance impacting the global financial system.

The Asian economies faced significantly high current account deficit, along with convertible capital account. The capital account convertibility increased the large volume of hot money which was used to finance current account deficit. The size of the hot money bubble increased over and above the threshold limit. The Asian economies were faced with large quantity of leverage access from the global financial system, which increased their foreign exchange risk to an unsustainable level. The ultimate crash of hot money market led to the collapse of their exchange system. This resulted into considerable fright to lenders to withdraw their credit which resulted into the credit crunch situation, and eventually the economy entered into the vicious cycle of bankruptcies. At the international level, the financial turmoil decreased the foreign exchange reserve and a clear case of capital flight from the home nation to other countries was witnessed on account of lucrative interest rate. However, the Asian countries had not devalued their currency and they kept interest rate higher to avoid the capital flight problem. They intervened in the forex market by buying excess domestic currency at the fixed exchange rate. This policy was not sustainable even in short-run. The Asian crisis was a combination of currency and systemic financial crises. The problem of imbalances in the balance sheet also existed. Asian economies were burdened with excessively high levels of short-term debt. The excessive leverage, dependent on short-term debt, and property bubbles were the identified features in this crises. The race for financial openness pursued by ASEAN region, without implementing prerequisite regulatory precaution, led to the trap of financial globalization.

In 2009, the Greece shock became visible as a full-blown financial crisis. The Greece spillover was followed by Ireland, Spain, Portugal and Cyprus which evolved into the sovereign debt crisis. Between 2000 and 2010, the debt-to-GDP ratio of Greece, Ireland, Italy, Portugal, and Spain went up to 100 percent and further increased from 2010 onwards. Also, the current-account deficit swelled to over and above the threshold limit in 2008. The Euro crisis became contagion in nature because some weak Eurozone countries were unable to control their sovereign debt. Banks in the Euro currency area were undercapitalized and faced liquidity and debt problems, along with unproductive wage rate in the public sector and inefficient pension assurance, which further increased debt significantly. Euro nations were engulfed in crisis and finally the rest of the world was impacted, with severe consequences.

In Asian Financial Crisis, Euro Crisis and Global Financial Crisis, the foreign portfolio investment (equity) reflected negative value (outflow is more than inflow) during the time interval of 1997 to 1998 and 2008 to 2010 in East Asia & Pacific, Latin America & Caribbean countries, South Asia, Europe and Central Asia. Whereas, FDI was less volatile in comparison to foreign portfolio investment (equity) during the same time interval. In the real estate sector, the rising housing price trend was found to be a global occurrence reflecting house price rise from 1997 to 2008 and house price decline from 2009 onwards. The world economy experienced a similar pattern of the housing price bubble across all regions due to global financial interlinkage.

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Annexure: 3.1

Foreign direct investment, net inflows in reporting economy (DRS, current US$)

Time	Scale (Precision)	India	China	Brazil	South Africa	Indonesia
1994	Millions (0.00)	973.27	33787	3072	374.41	2109
1995	Millions (0.00)	2143.63	35849.2	4859	1248.42	4346
1996	Millions (0.00)	2426.06	40180	11200	816.39	6194
1997	Millions (0.00)	3577.33	44237	19650	3810.54	4677
1998	Millions (0.00)	2634.65	43751	31913	550.34	-240.8
1999	Millions (0.00)	2168.59	38753	28576	1503.33	-1865.62
2000	Millions (0.00)	3584.22	38399.3	32779.24	968.83	-4550.36
2001	Millions (0.00)	5471.95	44241	22457.35	7270.34	-2977.39
2002	Millions (0.00)	5626.04	49307.98	16590.2	1479.8	145.09
2003	Millions (0.00)	4322.75	49456.85	10143.52	783.14	-596.92
2004	Millions (0.00)	5771.3	62108.04	18165.69	701.42	1896.08
2005	Millions (0.00)	7269.41	94958.94	15044.92	6191.52	7812.19
2006	Millions (0.00)	20029.12	114926.7	15373.31	-1556.22	4616.18
2007	Millions (0.00)	24928.16	144279.6	26074.44	1966.93	7549.09
2008	Millions (0.00)	42690.11	150489.9	30064.03	6728.51	9105.02
2009	Millions (0.00)	34111.34	147355.8	19906.35	4956.56	4981.78
2010	Millions (0.00)	27356.63	240537.2	40116.72	-4193.69	12468.37
2011	Millions (0.00)	34642.53	279761.8	54782.43	2903.39	14350.47
2012	Millions (0.00)	23171.91	241544.3	52837.78	1671.33	15886.71
2013	Millions (0.00)	26712.73	273189.3	41644.34	2698.92	19937.98

Source: International Monetary Fund, Balance of Payments, supplemented by data from United Nations Conference on Trade and Development and official national sources. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Portfolio investment, equity (DRS, current US$)

Time	Scale (Precision)	India	China	Brazil	South Africa	Indonesia
1994	Millions (0.00)	5491.13	NA	7280	88.09	1900
1995	Millions (0.00)	1590.48	NA	2775	2913.6	1493
1996	Millions (0.00)	3958.32	NA	5785	2318.46	1819
1997	Millions (0.00)	2555.66	5657	5099	5472.63	-4987
1998	Millions (0.00)	-601.15	765	-1768	8632.32	-4371
1999	Millions (0.00)	2317.07	612	2572	9001.05	-782.35
2000	Millions (0.00)	2481.31	6912	3075.91	4168.64	-1021.18
2001	Millions (0.00)	2949.58	849	2481.2	-962.21	442.09
2002	Millions (0.00)	1063.39	2249	1980.74	-388	876.55
2003	Millions (0.00)	8216.19	7729	2972.6	685.32	1130.49
2004	Millions (0.00)	9053.98	10923.2	2080.93	6661.13	2042.53
2005	Millions (0.00)	12151.21	20569	6451.25	7230.03	-165.27
2006	Millions (0.00)	9509.11	42861.2	7715.81	14958.98	1897.59
2007	Millions (0.00)	32862.82	18478.12	26217.34	8669.9	3558.96
2008	Millions (0.00)	-15030	8464.03	-7565.37	-4706.98	322.48
2009	Millions (0.00)	24688.93	29116.67	37071.24	9363.57	787.28
2010	Millions (0.00)	30442.23	31357.09	37670.69	5826.05	2131.56
2011	Millions (0.00)	-4048.29	5308.43	7174.28	-3768.72	-326.11
2012	Millions (0.00)	22809.1	29902.7	5599.97	-679.29	1697.64
2013	Millions (0.00)	19891.61	32594.97	11636.33	1011.2	-1826.99

Source: International Monetary Fund, Balance of Payments Statistics Yearbook. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Foreign direct investment, net inflows (BoP, current US$)

Time	Scale (Precision)	World	Low income	Lower middle income	Upper middle income	High income
1994	Millions (0.00)	241862.1	587.56	12807.81	68576.01	159890.7
1995	Millions (0.00)	319889.6	1136.44	15064.89	78157.9	225530.4
1996	Millions (0.00)	363597.4	1388.99	19039.09	93124.82	250044.5
1997	Millions (0.00)	461142.3	2437.96	19738.53	127708.4	311257.3
1998	Millions (0.00)	679469.7	2730.71	16328.51	131977.8	528432.7
1999	Millions (0.00)	961767.8	2575.66	11403.94	139291.4	808496.7
2000	Millions (0.00)	1319211	2390.54	10698.15	129704.8	1176417
2001	Millions (0.00)	726335.5	2581.16	11375.37	140114.2	572264.8
2002	Millions (0.00)	632024.8	3149.19	18099.82	129575.2	481200.6
2003	Millions (0.00)	568564	4313.05	17428.35	125128.5	421694.1
2004	Millions (0.00)	716659.7	4469.14	23518.22	168759.6	519912.8
2005	Millions (0.00)	1358708	4630.78	49663.89	246566.1	1057847
2006	Millions (0.00)	1764650	5192.09	71187.57	310742.4	1377528
2007	Millions (0.00)	2434285	9636.52	99292.85	455028.6	1870327
2008	Millions (0.00)	2193682	11509.84	124272.7	506098.5	1551801
2009	Millions (0.00)	1288055	9412.11	93684.38	315256.8	869701.5
2010	Millions (0.00)	1774999	13769.47	95962.08	435674.9	1229592
2011	Millions (0.00)	1895675	20557.91	113419.1	574410.2	1187288
2012	Millions (0.00)	1577526	22514.95	105694.2	539424.6	909892.4
2013	Millions (0.00)	1756575	23701.85	109463.1	605460.1	1017950

Source: International Monetary Fund, Balance of Payments, supplemented by data from United Nations Conference on Trade and Development and official national sources. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Portfolio equity, net inflows (BoP, current US$)

Time	Scale (Precision)	World	Low income	Lower middle income	Upper middle income	High income
1994	Millions (0.00)	121172.9	165.99	8885.55	18071.88	94049.5
1995	Millions (0.00)	120571.1	-10.42	3119.18	10849.05	106613.3
1996	Millions (0.00)	174042.6	-94.75	8367.12	15502.31	150267.9
1997	Millions (0.00)	199513.6	7.7	-1668.37	28895.14	172279.2
1998	Millions (0.00)	321677.4	12.42	-4596.04	7158.48	319102.6
1999	Millions (0.00)	605613.4	34.51	2926.15	8136.24	594516.5
2000	Millions (0.00)	657426.6	-0.39	1747.32	12035.91	643643.8
2001	Millions (0.00)	405827.8	22.99	3495.18	2998.26	399311.3
2002	Millions (0.00)	179292.2	13.46	2067.63	3784.81	173426.3
2003	Millions (0.00)	432617.7	18.17	9847.36	15985.59	406766.6
2004	Millions (0.00)	509330.4	52.66	12093.8	25956.79	471227.1
2005	Millions (0.00)	910959.5	45.51	14487.2	50582.09	845844.7
2006	Millions (0.00)	898034.1	105.47	17324.19	83622.34	796982.1
2007	Millions (0.00)	919831.5	115.38	43696.93	63153.78	812865.4
2008	Millions (0.00)	-181956	-115.22	-17429.4	-22317.5	-142094
2009	Millions (0.00)	859925.2	55.43	27087.4	85547.22	747235.2
2010	Millions (0.00)	793362.7	-104.75	40432.85	91009.72	662024.8
2011	Millions (0.00)	264141	294.31	143.93	9186.48	254516.3
2012	Millions (0.00)	790078	168.66	38104.83	58630.92	693173.6
2013	Millions (0.00)	702202.3	377.61	21034.09	43686.87	637103.7

Source: International Monetary Fund, Balance of Payments Statistics Yearbook. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Foreign direct investment, net inflows in reporting economy (Percentage Change)

Country Name	India	China	Brazil	South Africa	Indonesia
1994	120%	6%	58%	233%	106%
1995	13%	12%	131%	-35%	43%
1996	47%	10%	75%	367%	-24%
1997	-26%	-1%	62%	-86%	-105%
1998	-18%	-11%	-10%	173%	675%
1999	65%	-1%	15%	-36%	144%
2000	53%	15%	-31%	650%	-35%
2001	3%	11%	-26%	-80%	-105%
2002	-23%	0%	-39%	-47%	-511%
2003	34%	26%	79%	-10%	-418%
2004	26%	53%	-17%	783%	312%
2005	176%	21%	2%	-125%	-41%
2006	24%	26%	70%	-226%	64%
2007	71%	4%	15%	242%	21%
2008	-20%	-2%	-34%	-26%	-45%
2009	-20%	63%	102%	-185%	150%
2010	27%	16%	37%	-169%	15%
2011	-33%	-14%	-4%	-42%	11%
2012	15%	13%	-21%	61%	26%

Source : International Monetary Fund, Balance of Payments, supplemented by data from United Nations Conference on Trade and Development and official national sources. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Portfolio investment, equity (Percentage Change)

Country Name	India	China	Brazil	South Africa	Indonesia
1994	-71%	NA	-62%	3208%	-21%
1995	149%	NA	108%	-20%	22%
1996	-35%	NA	-12%	136%	-374%
1997	-124%	-86%	-135%	58%	-12%
1998	-485%	-20%	-245%	4%	-82%
1999	7%	1029%	20%	-54%	31%
2000	19%	-88%	-19%	-123%	-143%
2001	-64%	165%	-20%	-60%	98%
2002	673%	244%	50%	-277%	29%
2003	10%	41%	-30%	872%	81%
2004	34%	88%	210%	9%	-108%
2005	-22%	108%	20%	107%	-1248%
2006	246%	-57%	240%	-42%	88%
2007	-146%	-54%	-129%	-154%	-91%
2008	-264%	244%	-590%	-299%	144%
2009	23%	8%	2%	-38%	171%
2010	-113%	-83%	-81%	-165%	-115%
2011	-663%	463%	-22%	-82%	-621%
2012	-13%	9%	108%	-249%	-208%

Source: International Monetary Fund, Balance of Payments Statistics Yearbook. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

Foreign direct investment, net inflows in reporting economy (DRS, current US$)[149]

Country Name	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & North Africa	South Asia	Sub-Saharan Africa
Scale (Precision)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)
1994	45.56	3.41	25.5	2.51	1.58	3.41
1995	50.8	8.27	27.07	0.87	2.93	4.26
1996	58.64	7.18	38.8	1.29	3.51	3.99
1997	62.22	11.64	60.3	1.85	4.9	8.41
1998	57.82	11.25	68.86	2.54	3.55	6.79
1999	50.4	9.95	79.05	1.86	3.08	8.95
2000	45.17	9.06	73.83	3.72	4.37	6.46
2001	48.92	14.67	67.27	3.84	6.15	14.01
2002	59.38	12.88	52.66	8.05	6.77	11.11
2003	59.17	17.79	40.46	9.91	5.46	13.61
2004	77.56	30.03	59.31	9.67	7.82	11.22
2005	129.09	49.44	67.03	16.88	10.89	20.11
2006	153.02	86.49	65.71	27.34	25.78	17.48
2007	196.38	158.81	112.46	28.11	32.47	30.4
2008	211.23	165.95	121.5	29.55	50.88	44.31
2009	154.49	51.14	71.23	26.32	39.47	37.66
2010	291.15	23.84	110.86	22.28	31.21	32.22
2011	339.91	75.81	144.95	13.67	40.37	40.01
2012	313.66	64.42	150.33	19.3	27.41	37.05

Source: International Monetary Fund, Balance of Payments, supplemented by data from United Nations Conference on Trade and Development and official national sources. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

[149] Foreign direct investment (net) shows the net change in foreign investment in the reporting country. Foreign direct investment is defined as investment that is made to acquire a lasting management interest (usually of 10 percent of voting stock) in an enterprise operating in a country other than that of the investor (defined according to residency), the investor's purpose being an effective voice in the management of the enterprise. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows in the reporting economy. Data are in current U.S. dollars.

Portfolio investment, equity (DRS, current US$)[150]

Country Name	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & North Africa	South Asia	Sub-Saharan Africa
Scale (Precision)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)	Billions (0.00)
1994	1.51	0.99	16.01	0.24	6.85	0.15
1995	3.75	0.19	5.46	0.03	1.58	2.95
1996	5.04	0.24	11.36	0.17	4.13	2.42
1997	4.13	0.51	12.53	0.61	2.88	5.55
1998	-3.05	-0.17	-2.75	-0.08	-0.63	8.65
1999	1.26	0.64	-4.15	0.68	2.38	9.03
2000	6.59	0.72	-0.14	0.25	2.52	4.16
2001	1.77	0.07	2.7	-0.04	2.78	-0.93
2002	3.84	0.11	1.76	-0.45	1.09	-0.36
2003	12.49	1.11	2.97	0.21	8.05	0.74
2004	19.31	1.5	-0.61	0.7	9.01	6.69
2005	25.91	6.62	10.64	2.41	12.41	8.16
2006	56.19	6.64	11.2	0.96	10.39	16.79
2007	35.06	3.49	28.43	-2.1	33.97	10.16
2008	-7.58	-0.41	-11.6	0.42	-15.82	-5.63
2009	30.18	3.67	41.25	1.2	24.1	10.54
2010	40.32	3.74	39.28	1.96	29.91	8.15
2011	6.71	-0.66	2.55	-0.62	-4.27	-1.02
2012	37.9	7.99	20.21	-1.29	23.39	9.39

Source: International Monetary Fund, Balance of Payments Statistics Yearbook. Data starting from 2005 are based the sixth edition of the IMF's Balance of Payments Manual (BPM6).

[150] Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.

4. Global Financial Integration

SCHEME OF THE CHAPTER

1. Background Note:

Studies on Global Financial Integration (GFI) have stated that GFI increased economic growth and improved risk-sharing by allocating capital more efficiently. GFI has promoted movement of cross-border financial flow, which has facilitated portfolio diversification (García-Herrero and Wooldridge, 2007)[1]. The global financial base has widened and deepened due to financial openness.[2] Some nations have taken appropriate steps in harmonizing national standard with international ones. In addition, the cross-border financial ties have been promoted through formal agreements or contracts. The European Union (EU) and the Association of Southeast Asian Nations (ASEAN) are examples of economic integration and are one step ahead of financial integration (Thakkar and Nagar, 2014).[3]

The financial integration result in the law of one price, which means that assets will identify with risks and return and thus will command the same price. The incident of global financial crisis has questioned the policy makers on whether financial integration leads to efficient resource allocation or on the contrary has the GFI spread risk to various countries?[4] The financial integration has been the main driving force behind the increase in financial innovation in international trade among countries with the highly developed financial system. The internationalization has increased the volume of trade and real business across the nations.[5] The financial integration can be measured through the degree of capital mobility in cross-border countries. The popular estimation of GFI is the stock of international assets and liabilities as a percentage of GDP[6] where high ratio denotes great

[1] Alicia García-Herrero and Philip Wooldridge, 'Global and Regional Financial Integration: Progress in Emerging Markets' (September 2007). BIS Quarterly Review <http://www.bis.org/publ/qtrpdf/r_qt0709g.pdf> accessed 01-Mar-16
[2] ibid.
[3] Hitesh Thakkar and Ranita Nagar, 'Global financial integration ensures global economic growth : Merely a theoretical approach' [2014] Role of Financial Industry in Accelerating Economic Growth, Centre for Financial Services , 147 <http://gtuelibrary.edu.in/E-Book/Repository/CCFS/16.pdf> accessed 01-Mar-16
[4] Otmar Issing, 'The globalisation of financial markets' (European Central Bank (ECB), 12 September 2000) <https://www.ecb.europa.eu/press/key/date/2000/html/sp000912_2.en.html> accessed 01-Mar-16
[5] Hitesh Thakkar and Ranita Nagar (n 3)147
[6] IMF Staff, 'Globalization: A Brief Overview' (May 2008) <https://www.imf.org/external/np/exr/ib/2008/053008.htm> accessed 01-Mar-16

openness. The GFI has provided a mechanism to access capital flow with an equivalent price. This process has increased capital inflow in current account deficit countries. However, the case of Eurozone needs to be noted where unproductive utilization of financial resources resulted in the external debt crisis.[7]

2. Conceptual and Theoretical Understanding

'The GFI is the framework in which stakeholders face a uniform set of rules and regulation, have equal access and are treated equally with regard to finance'.

'The GFI will hold the law of one price where all assets identify with risks and returns. Capital would flow from the low return to high return country and in this process, risk is adjusted as per expected rates of return, which tend to equalize across the countries'.

Financial integration has harmonized financial instruments across the world. The development of the financially integrated system began by opening a country's financial institutions to the foreign participants as well as promoting local players to invest overseas.[8] The national stakeholders are not only dependent on their own financial sector, but also can borrow from the global financial market. The borrowing depends on capital account liberalization. The core principle of GFI is portfolio diversification, risk-sharing, and allocation of capital efficiently.

“Financial integration can proceed with enforcement of a formal international treaty. This refers to two distinct elements. One is the provision for concerted or cooperative policy responses to financial disturbances. The other is the elimination of restrictions on cross-border financial operations by member economies, as well as harmonisation of regulations

[7] Hitesh Thakkar and Ranita Nagar (n 3) 147
[8] Alicia García-Herrero and Philip Wooldridge (n 1)59-60

of financial systems to achieve full unification of regional financial markets, taxes and regulations between member economies”.[9]

The macroeconomic mechanism strengthens this system through rewarding good policies and penalizing bad policies. The prerequisite of GFI is based on sound macro-prudential regulation. This improves endogenous growth in the overall financial system (Obstfeld, 1998).[10] Financial globalization has enhanced the depth and breadth of the domestic financial system and initiated the practice of financial intermediation by reducing the cost and abnormal profits, through lowering the markup rates and increasing fair competition (Baldwin and Forslid, 2000).[11] The GFI minimizes the cost of credit which increase *economies of scale*[12]. The investors have varieties and diversified assets to borrow which enhance the *economies of scope*.[13]

Philip R. Lane (2010)[14] describes the International Financial Integration ratio (IFI ratio) as the sum of foreign assets (A) plus foreign liabilities (L), expressed as a ratio to GDP

IFI = 100 × A+ L ÷ GDP[15] .... (1)

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[9] N.W. Ho, ‘Financial Integration: Concepts and Impacts’ [2009] Macao Monetary Research Bulletin, Issue No 10 , 69

[10] Maurice Obstfeld, ‘The Global Capital Market: Benefactor or Menace?’ [1998] National Bureau of Economic Research Working Paper No 6559 , 3 <http://www.nber.org/papers/w6559.pdf> accessed 02-Mar-16

[11] Richard E. Baldwin and Rikard Forslid, ‘Trade liberalisation and endogenous growth’ (2000) 50(2) Journal of International Economics , 497

[12] The decrease in unit cost of a product or service resulting from large-scale operations, as in mass production.

[13] An economic theory stating that the average total cost of production decreases as a result of increasing the number of different goods produced.

[14] Philip R. Lane, ‘International Financial Integration and the External Positions of Euro Area Countries’ [2010] OECD Economics Department Working Papers No 830, ECO/WKP(2010)86 , 6

[15] ibid.6

Table A.1. Trends of International Financial Integration (IFI)[16]

Country Name	1998	2002	2007
Austria	2.01	3.44	6.04
Belgium	5.11	6.85	10.48
Finland	2.08	3.36	4.84
France	2.68	3.40	5.53
Germany	2.01	3.09	4.12
Greece	1.16	1.71	2.77
Ireland	9.35	16.01	25.74
Italy	1.77	2.10	2.87
Luxembourg	112.26	175.57	244.40
Netherlands	4.77	7.03	9.84
Portugal	2.41	3.63	4.84
Slovakia	1.17	1.49	1.58
Slovenia	0.83	1.32	2.41
Spain	1.56	2.50	3.58

Note: IFI is sum of foreign assets and foreign liabilities, expressed as a ratio to GDP

Table: A.2. GDP (constant 2005 US$); Scale Billions (0.0)

Country Name	1998	2002	2007	2010	2012
Austria	261.4	287.8	327.9	325.6	337.7
Belgium	324.8	356.2	398.6	400.4	406.8
Finland	157.1	179.1	215.3	204.2	207.8
France	1842.4	2027.9	2239.3	2204.4	2249.4
Germany	2557.7	2726.1	2962.4	2954.4	3073.9
Greece	182.3	212.3	262.3	241	208.2
Ireland	130	176.7	224.4	203.3	208
Italy	1617.6	1740.5	1856.3	1763.9	1729.9
Luxembourg	26.9	33.7	42.1	40.7	41.4
Netherlands	549.5	609.9	686	683.1	680.9
Portugal	170.2	189.2	199.2	197.2	188.4
Slovak Republic	47.6	52.2	73.4	76.9	80.6
Slovenia	27.2	32	40.4	39	38.3
Spain	875.4	1025.5	1217.8	1179.2	1160.5

Source: World Development Indicators

[16] ibid.6

The IFI ratio was higher in Ireland, Belgium and Luxembourg. However, Luxembourg, Ireland and Belgium also faced the problem of capital flight in Eurozone crisis

3. Rational and Emergence of GFI

GFI facilitates borrowing when current account is in deficit (BoP) situation and lending takes place when current account is in surplus (BoP), and it is based on the following Keynesian equation of the net export curve.[17]

Nx = I –S[18] where, Nx = net export, I=investment and S= Saving

Nx > I-S reflects the phenomena where the country's current account is in surplus, after fulfilling the domestic capital requirement. There will be net capital outflow from surplus country to deficit country.[19] Whereas, **Nx < I-S**, the country's current account is in deficit, signifies that domestic finance is not adequate, so the net result is capital inflow in deficit country.[20] The poor and underdeveloped countries possess low levels of income and negative marginal propensity to save. As long as the marginal return on capital is equal to the cost of investment, the net foreign inflow can supplement the domestic saving. It increases the level of physical capital per worker and helps the nation to raise their economic growth.

The present global economy is highly interdependent with one another for trade, finance and other economic service. Different countries possess different geographical advantage and specialization. The mechanism of GFI provides fair allocation and distribution of scarce resources including finance. Mostly all countries have opened their economy in a phased manner from 1990's onwards. GFI provides financial arbitrage where the variation

[17] Agénor, P., R. (2003). Benefits and Costs of International Financial Integration: Theory and Facts. World Economy, Volume 26, Issue 8, 1092–1118.
[18] H.L. Ahuja, *Macroeconomics Theory and Policy* (18th edn, S. Chand & Company Ltd 2012) Ch 5A Determination of National Income in open economy with government: Three sector and four sector models, 133.
[19] ibid.133
[20] ibid.133

in marginal efficiency of capital (MEC) and price of capital become identical globally.[21] There are various tools of GFI. These include foreign direct investment, foreign portfolio investment, external commercial borrowing, euro issues, euro bond, ADR/GDR, borrowing from international financial institution (World Bank, IMF etc.), external deposits (for example, in India), Foreign Currency (Non-Resident) Account (Banks) Scheme [FCNR (B)]Account, Non-Resident (External) Rupee Account Scheme [NRE Account], Non-Resident Ordinary Rupee Account Scheme [NRO Account].[22]

The GFI has enhanced structural efficiency in factor markets. Information symmetry has made the factors aware about their marginal productivity and opportunity cost. It has motivated factors to move to other nations for a better reward, due to this factor mobility has increased in both labour and capital market. Financial Openness (FO) has provided the right to capital to move freely in the global financial system.[23] Rajan and Zingales stated that financial development has boosted innovation and integration in global finance.[24] The countries with open capital accounts experienced a larger increase in financial depth over the countries with closed capital accounts.[25] Agosin and Mayer's (2000)[26] study was based on data from 32 countries, for the period of 1970-96 and they found strong crowding out effect of the domestic capital market in Latin American countries and crowding in effect in Asia. In 1990's, India and some other countries faced Balance of Payment crisis where their current account deficit was growing and capital account was weak, which deteriorated their Balance of Payment. They received financial assistance from IMF with the condition of financial openness, because of which these Asian countries made their capital account convertible. This ultimately led to promoting GFI.[27]

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[21] Hitesh Thakkar and Ranita Nagar (n 3)148

[22] Stijn Claessens and Sergio L. Schmukler, 'International Financial Integration Through Equity Markets: Which Firms from Which Countries Go Global?' [2007] IMF Working Paper 07/138, 3 <https://www.imf.org/external/pubs/ft/wp/2007/wp07138.pdf> accessed 02-Mar-16

[23] Hitesh Thakkar and Ranita Nagar (n 3) 151

[24] Raghuram G. Rajan and Luigi Zingales, 'Financial Dependence and Growth' [1996] National Bureau of Economic Research NBER Working Paper No 5758 ,30

[25] Michael W. Klein and Giovanni Olivei, 'Capital Account Liberalization, Financial Depth and Economic Growth' [1999] National Bureau of Economic Research NBER Working Paper No 7384 ,9

[26] Manuel R. Agosin and Ricardo Mayer, 'Foreign Investment in Developing Countries: Does it Crowd in Domestic Investment?' [2000] UNCTAD/OSG/DP/146 , 1 <http://unctad.org/en/docs/dp_146.en.pdf> accessed 02-Mar-16

[27] Hitesh Thakkar and Ranita Nagar (n 3) 152

4. Challenges for Cross-Border Financial Transaction

GFI leads to greater financial stability and widens risk sharing around the world. However, the global financial crisis has disproved this corollary. In the absence of appropriate government intervention, the privately gainful business led to systemic risk.[28] GFI should not be considered without associated risk and cost. There are many instances where due to GFI, markets have failed severely. This phenomenon led to capital flight from weak financial system to strong financial system.[29]

The cons of GFI are that high volume of capital flows move to advanced countries and emerging countries, whereas inadequate finance reaches small and least developed countries. The high degree of fluctuation and volatility of international financial instruments lead to contagion effects at the global level. This spreading of toxic effect depends upon the severity and leakages in the global financial regulatory system (Bhattacharya, Montiel, and Sharma, 1997).[30] The trend of cross-border financial flows largely moved to South East Asia, Latin America, Central Asia, and Asia. The capital access was limited to few countries with abundant natural resources.[31] Global financial openness was unopened for a few nations without any rational viewpoint. The financial excludability was a characteristic in GFI which means that many countries received a relatively small portion of inflows in absolute terms, and several countries got significant inflow in the relative terms.

The proportion of capital flows misrepresents to the outer world that on account of GFI, there is increased investment and overall financial health in the global financial system. However, in some cases, speculative and low quality of capital flow reduced the economy's competitiveness, as reflected in the growing external imbalances. This was the classic case

[28] Joseph E. Stiglitz, 'Risk and Global Economic Architecture: Why Full Financial Integration May Be Undesirable' [2010] National Bureau of Economic Research NBER Working Paper No 15718 , 1

[29] John H. Boyd and Bruce D. Smith (n 21)

[30] Amar Bhattacharya, Peter J. Montiel and Sunil Sharma, 'Private capital inflows to sub-saharan africa: An overview of trends and determinants' in Zubair Iqbal and others (eds), *External Finance for Low-income Countries* (International Monetary Fund 1997) 207

[31] ibid.

in which funds were allocated wrongly on the demand side, and asymmetric information prevailed in the supply-side. There have been instances where foreign investors shift the controls and take inside information of the firm. They hold stock of high productive firms and sell stocks of low productive stock to uninformed domestic savers. These distortions occur mainly on account of the lack of corporate transparency, which gives rise to the familiar problem of asymmetric information between insiders and outsiders.[32]

Macroeconomic instability occurs due to inducement of oversized capital inflows. To stabilize the macroeconomies, the monetary policy sterilization tools, balance foreign currencies or else risk an appreciation of their currency, which leads to increasing current account deficit in floating exchange rate regime. By contrast, under a fixed exchange rate system, competitive losses and rising imbalances can erode assurance in the feasibility and sustainability of the peg. These cases ultimately turn into external currency turmoil.[33]

The developing and least developed economies are often rationed out of world capital markets. Whereas, countries with a greater potential to access these markets, such as oil exporting countries turns, the accessibility of financial funds very asymmetric. Thus, access of funds face pro-cyclicality, which means countries may attract large capital inflows in favourable shocks and countries are forced to over-adjust during adverse shock hits.[34]

With global financial integration the volume of short-term debt increased significantly in Brazil, Korea, Mexico, Russia, and Thailand. This short-term debt erupted during the financial crisis in the sample countries (Figure I).[35]

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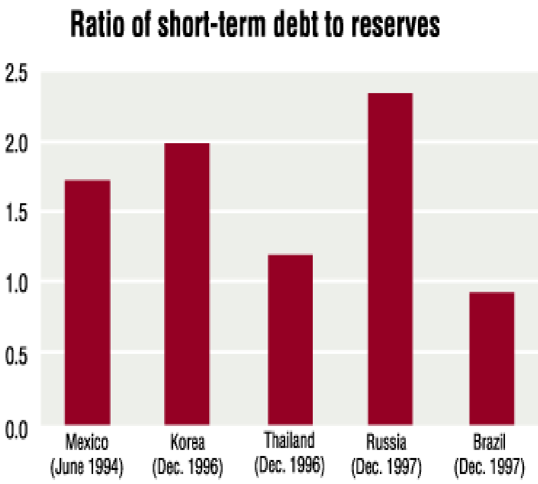
[32] Assaf Razin, Efraim Sadka, and Chi-Wa Yuen, 'Excessive FDI Flows Under Asymmetric Information' [1999] National Bureau of Economic Research NBER Working Paper No 7400 , 1

[33] Pierre-Richard Agénor and Luiz A. Pereira da Silva, 'Macroeconomic Stability, Financial Stability, and Monetary Policy Rules' , First complete draft: August 12, 2011, 9 <http://www.iadb.org/res/centralBanks/publications/cbm67_851.pdf> accessed 05-Mar-16

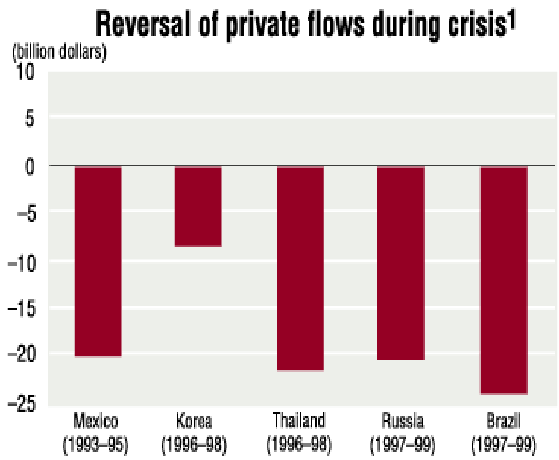
[34] Pierre-Richard Agénor, 'Benefits and Costs of International Financial Integration: Theory and Facts,' Prepared for the conference on Financial Globalization: Issues and Challenges for Small States (Saint Kitts, March 27-28, 2001), organized by the Word Bank , 6

[35] Uri Dadush, Dipak Dasgupta, and Dilip Ratha, 'The Role of Short-Term Debt in Recent Crises' (2000) 37(4) Finance and Development : A quarterly magazine of the IMF <http://www.imf.org/external/pubs/ft/fandd/2000/12/dadush.htm> accessed 05-Mar-16

Figure I: Ratio of short-term debt to reserve and Reversal of Private flows during crisis[36]



Sources: Bank for International Settlements; and IMF, *International Financial Statistics*, various issues.



Source: IMF, *International Financial Statistics*, various issues.
1 Excluding foreign direct investment.

The short-term capital flows imbalance tend to be larger and more frequent in emerging economies. This makes the marginally creditworthy borrowers to be 'squeeze out' of world capital market. The perceived risk and herding behaviour increased even during small scale external shocks in these countries (table B).[37]

Table B: Short-term debt inflows turned into outflows in 1998 (billion dollars)[38]

	1997	1998
All developing countries	43.5	–85.0
East Asia and Pacific	0.8	–68.0
Korea	–8.0	–29.9
Thailand	–6.9	–15.1
Indonesia	1.1	–11.8
Malaysia	3.4	–5.3
Latin America and Caribbean	24.1	–5.7

Source: Bank for International Settlements.

[36] Uri Dadush, Dipak Dasgupta, and Dilip Ratha, 'The Role of Short-Term Debt in Recent Crises' (2000) 37(4) Finance and Development : A quarterly magazine of the IMF <http://www.imf.org/external/pubs/ft/fandd/2000/12/dadush.htm> accessed 05-Mar-16
[37] ibid.
[38] ibid.

Claessens, Demirguc-Kunt, and Huizinga's (2000) empirical study of foreign banks of 80 countries, in the developed and emerging economies, from 1988 to 1995, found reduction in profitability and increase in overhead cost, and the interest rate was also not efficient. They also stated that there is limited benefit from financial openness[39] and that there is direct relationship between capital account liberalization and financial market volatility. The capital flows were linked with speculative pressure.[40] The private capital flow was channeled to the domestic economy through commercial banks credit. The market inefficiencies enlarged the change in external interest rates and lead to high fluctuations in capital flows.[41]

The economic analysis of herding behaviour can be seen as a rational response in situations of imbalance. The payoff externalities, in which the payoff to an agent (investors) may be directly related to the number of other agents adopting the same action. The principal-agent consideration results from the fact that a portfolio manager, in order to maintain or improve his/her reputation, when the market is imperfectly informed, may prefer to either hide in the herd or ride the herd to generate reputation gains. Finally, the information cascades due to the fact that the (small) agents, who are only beginning to invest in the country, may find it optimal to ignore their own information and follow the behaviour of larger and more established investors.[42]

The research on Global Capital Market by McKinsey Global Institute in 2013 stated that the global financial asset includes market capitalization of equity, corporate bonds, government bond and loans which have increased from 12 trillion dollars to 206 trillion dollars from 1980 to 2007, i.e. rise from 120% to 355% with annual growth of 8 %. In 2013 it reduced to 225 trillion dollar. The global financial asset declined to 43 %, an annual

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[39] Claessens. S, Demirguc-Kunt .A, & Huizinga, H. 'The Role of Foreign Banks in Domestic Banking Systems' in Stijn Claessens and Marion Jansen (ed), *The internationalization of financial services: Issues and lessons for developing countries* (Kluwer Law International 2000)

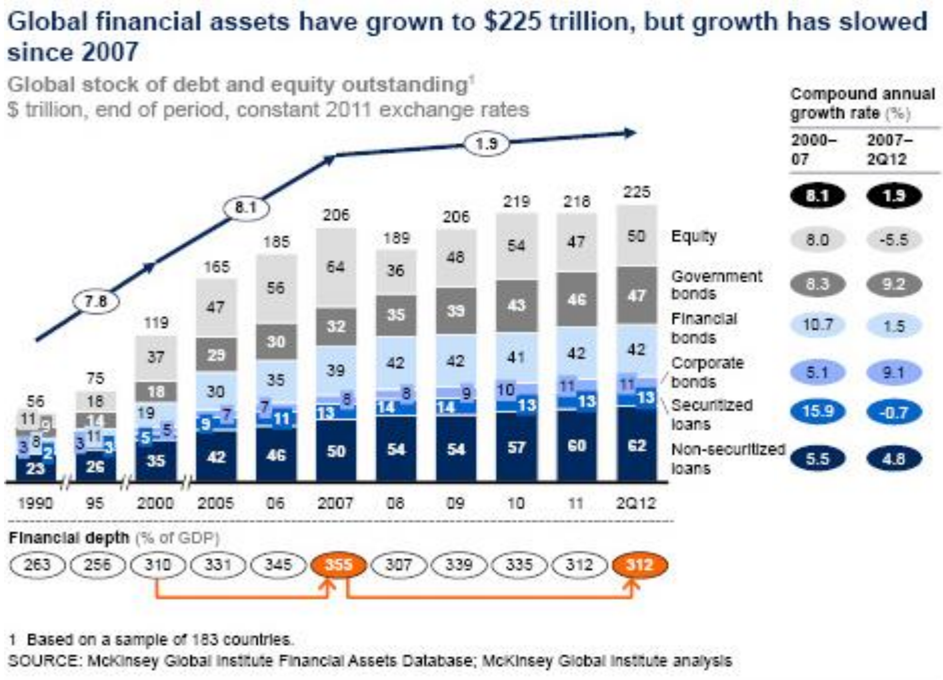
[40] Roberto Chang, and Andrés Velasco, 'Banks, debt maturity and financial crises' (2000) 51(1) Journal of International Economics , 169

[41] Pierre-Richard Agenor and Joshua Aizenman, 'Volatility and the Welfare Costs of Financial Market Integration' [1998] National Bureau of Economic Research NBER Working Paper No 6782 , 3

[42] Pierre-Richard Agénor, 'Benefits and Costs of International Financial Integration: Theory and Facts,' (n 40) 16

reduction of 1.9 %. From 2007 onwards, equity market declined in larger percentage over the bond and loan market.[43]

Figure II: Global financial assets growth slowed down afterward GFC[44]



The Global financial integration framework provides a platform to investors for portfolio diversification and opportunities for getting greater returns based on market forces. Though, the capital inflow may lead to increase in potential growth and welfare gains, however, the risk and volatility of capital flow in the open economy may cost problem of systematic risk. The Asian financial crisis, global financial crisis, and Euro currency crisis were evidence of the cost of financial openness. The impact of GFI improved productivity and competence of the domestic financial sector but the question remains whether it was enough proficient to overcome external shocks.[45]

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[43] Susan Lund and others, 'Financial globalization: Retreat or reset?: Global capital markets 2013' (March 2013). Report - McKinsey Global Institute, 2 <http://www.mckinsey.com/global-themes/employment-and-growth/financial-globalization> accessed 06-Mar-16

[44] Susan Lund and others, 'Financial globalization: Retreat or reset?: Global capital markets 2013' (March 2013). Report - McKinsey Global Institute, 2 <http://www.mckinsey.com/global-themes/employment-and-growth/financial-globalization> accessed 06-Mar-16

[45] Pierre-Richard Agénor, 'Benefits and Costs of International Financial Integration: Theory and Facts,' (n 40) 19

4.1. Impact of Financial Openness

Mixed results of economic prosperity and external shock have been witnessed because of GFI. The national policy makers have a choice of financial openness versus autarky. The national regulators design policies based on the principle of minimize risk and maximize long-term gain. The GFI impact can be moderated by macroeconomic discipline, strong monetary and fiscal policy to overcome short-term shocks, improvment in current account balances, fostering risk management capacities in the weaker financial institution, and providing symmetric information.[46]

4.1.1. The Volatility in International Financial Flow

The volatility in global financial flow can lead to contagious effects. This can further result in massive capital outflows and vulnerability of a country's currency. This type of contagion is often said to be caused by "irrational" phenomena, such as financial panics, herd behaviour, loss of confidence, and increased risk aversion. This phenomena can be individually rational and still lead to a crisis (Dornbusch, Park, and Claessens, 2000).[47]

Chuhan, Perez-Quiros and Popper (1996)[48] made the observation that the short-term capital flows such as foreign portfolio investment were more volatile as compared to long-term capital flow, such as, foreign direct investment. The World Bank study based on 33 developing countries from 1986 to 1998 found that capital flow increase at the time of pro-cyclical growth and decline at the time of counter-cyclical shock (Dadush, Dasgupta and Ratha, 2000).[49]

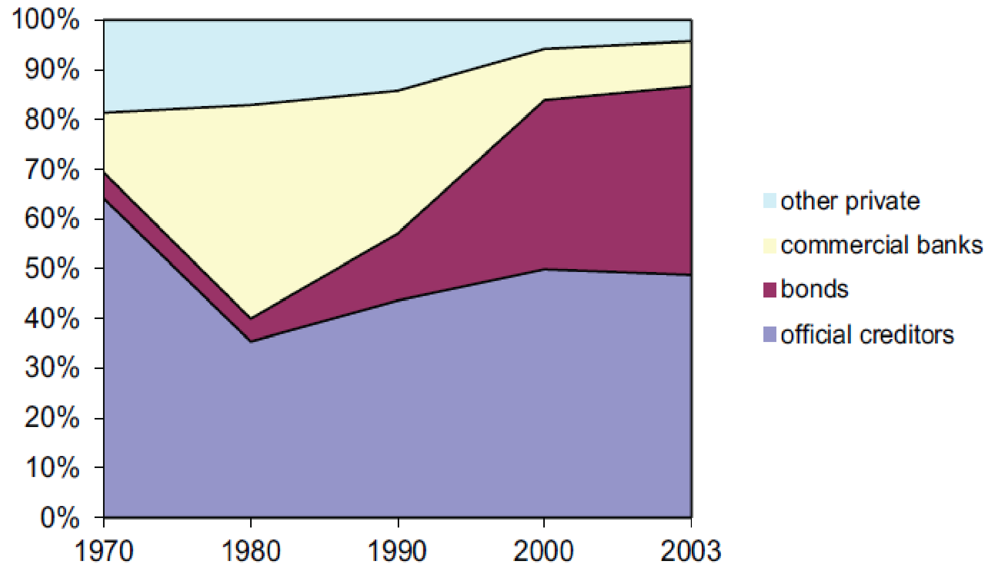
The integration of international finance with domestic finance has enhanced the quality and standard of access to financial services, led to technological up-gradation, reduced

[46] ibid.35
[47] Rudiger Dornbusch, Yung Chul Park, and Stijn Claessens, 'Contagion: Understanding How It Spreads' (2000) 15(2) The World Bank Research Observer , 180
[48] Punam Chuhan, Gabriel Perez-Quiros, and Helen Popper, 'International capital flows: do short-term investment and direct investment differ?' [1996] The World Bank Policy Research Working Paper Series, No 1669 , 1
[49] Uri Dadush, Dipak Dasgupta, and Dilip Ratha (n 41)

information gap between services provider and services user, implemented international financial rules and regulation, and allowed the domestic financial institutions to establish overseas services in other parts of the world. These features have also increased systemic risks. Such that, all small domestic shocks will have the potential to lead to global market failure because of the interconnection of the global financial system with the national financial system.[50]

The global financial integration increased significantly from 1990's and has continued to grow. The assets seek higher return and the opportunity to diversify risk internationally. Many countries have liberalized their capital account in a phased manner which has augmented demand for private capital flows. The financial integration is not wrong but policy makers should inject better policies to streamline global financial integration in GFRS (Underhill and Blom, 2013).[51]

Figure III: Composition of long-term debt stocks of middle-income countries[52]



[50] Gerard Caprio and Patrick Honohan, 'Restoring Banking Stability: Beyond Supervised Capital Requirements' (2000) 68(1) The South African Journal of Economics , 5

[51] Geoffrey Underhill and Jasper Blom, 'Global Financial Integration, Twin Crises, and the Enduring Search for Financial Stability' [2013] Centre for Economic Policy Research , 20 <http://www.voxeu.org/sites/default/files/file/GlobalFinancialIntegration.pdf> accessed 06-Mar-16

[52] ibid. 35

The figure III[53] shows the structure of long-term debt stock of middle income shifting from traditional commercial banks loan to other financial instruments.

Investors determine the optimal trade-off between diversification and information collection. Based on information anecdotes, the rational herding behaviour becomes prevalent as world capital market grows. There are clear incentives for crediting rumours. Ultimately, each investor selects the same portfolio to purchase or sell. So, small rumours can induce high capital inflows (purchase) or capital outflows (sale). The chaos in South East Asia, Latin America, and Mexico was based on similar principles.[54]

The global financial integration approach is theoretical rather than pragmatic. The movement of financial flows is short-term, based on quick high return, and attracted to another market for a lucrative return. The task of the financial regulator is to restrain such toxic capital flow which is not easy. The GFI is progressive only during stable and normal period. The scale of GFI requires institutional innovation and the obligation to come closer for macro-prudential oversight.[55]

Capital flow increase domestic investment, however, their impact on growth depends upon the nature of investment such as portfolio investment for speculative gain, real estate sector investment for short term gain etc. Low-productivity investments in the non-tradable sector may reduce the economy's capacity to export and lead to growing external imbalances. This misallocation of capital flows may result in distortions in the domestic financial system.

5. Global Financial Integration (GFI): Statistical Facts and GFC:

The Cross-border capital flows (include – FDI, Equity and Bonds) increased from 0.5 dollar trillion in 1989 to 11.8 dollar trillion in 2007. After the GFC, the cross-border capital

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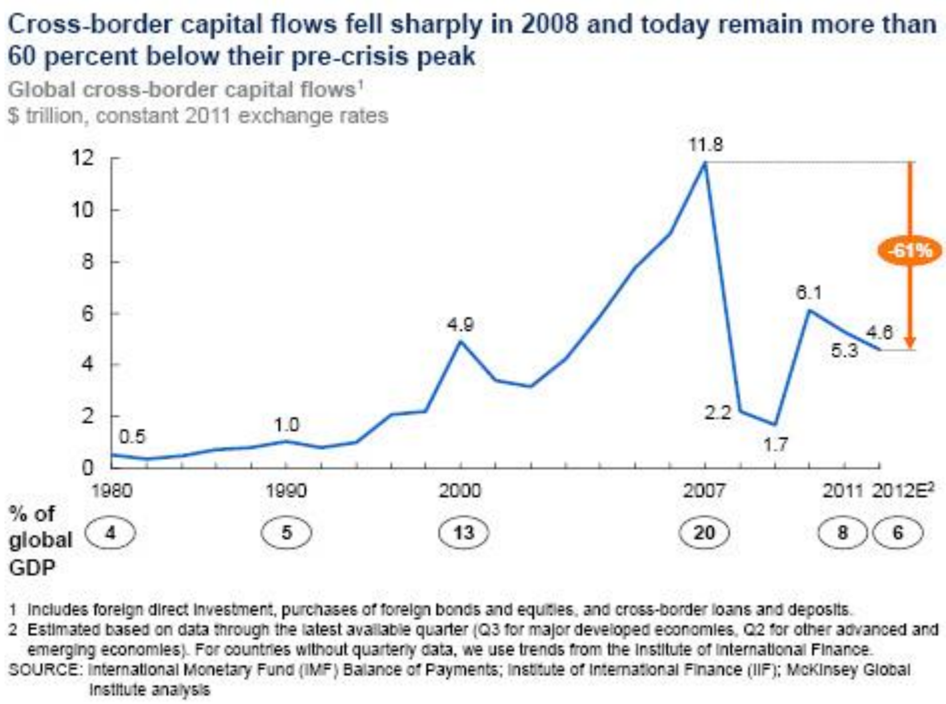
[53] ibid. 35

[54] Guillermo A. Calvo and Enrique G. Mendoza, 'Rational Herd Behavior and the Globalization of Securities Markets' [1998] Duke Economics Working Paper No 97-26 , 2 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=114723> accessed 06-Mar-16

[55] N.W. Ho (n 9)

flows reduced to 1.7 trillion, followed with small improvement and presently stands at 60% below peak level. The following figure IV describes the impact of GFI in the context of external shocks.[56]

Figure IV: Cross-border capital flows decrease rapidly in GFC

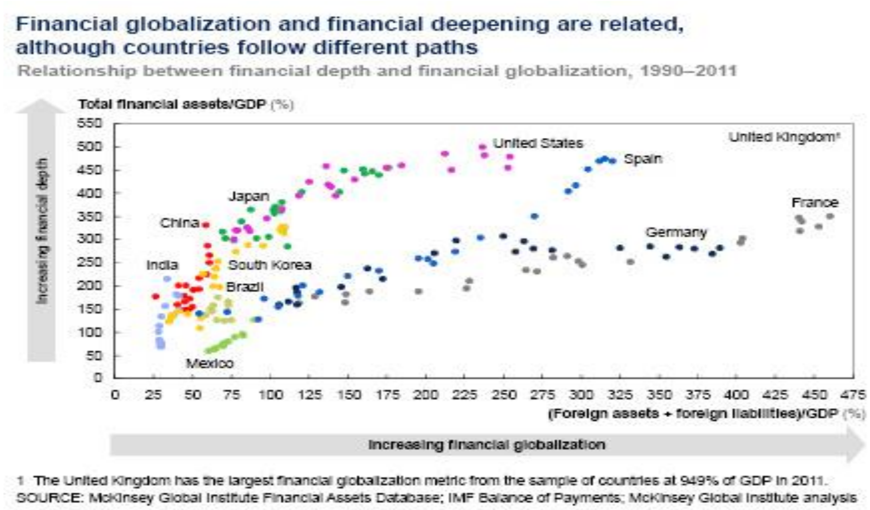


A healthy financial system requires a strong institutional framework in place to absorb capital inflows, reinforcing financial globalization and financial deepening. However, certain risks are associated, like risk of volatility, exchange rate pressure and vulnerability to a sudden stop in capital outflows. The growth in government debt beyond sustainable levels have a depressing consequence for global finance.[57] Approximately 30 % of equities and bonds worldwide are owned by foreign investors. Europe is highest, with 53 % percent owned by foreign investor (2/3 of whom are from other European Countries). In North America, 23 % of bonds and equities are owned by foreign investors in China, the corresponding figure is 9.4 %. The presence of foreign investors enhances domestic

[56] Susan Lund and others (n 47) 4
[57] Ross Levine, 'Finance and Growth: Theory and Evidence' [2004] National Bureau of Economic Research NBER Working Paper No 10766 , 1 <http://www.nber.org/papers/w10766.pdf> accessed 07-Mar-16

financial markets beyond the simple metric of size.[58] The following figure V describes the different strategy of financial depth and financial globalization implemented by various countries.[59] By 2030, emerging countries are forecasted to reach South Korea's current financial depth. The average financial depth will increase from 157 percent of GDP today to 237 percent of GDP by 2020. This translates into growth of financial assets from $ 43 trillion as of mid-2012 to more than $ 125 trillion by 2020 – representing significant opportunities for banks, investors and other financial intermediaries around the world.[60]

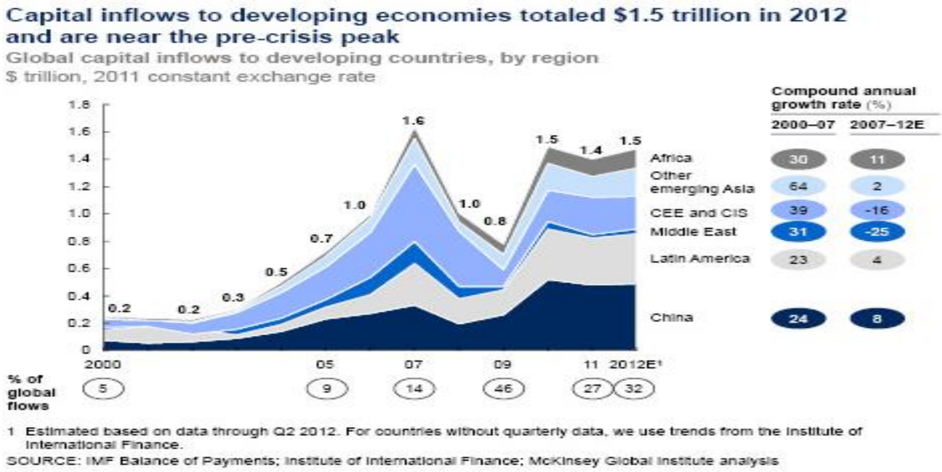
Figure V: Financial Depth and Financial Globalization[61]



The phrase globalization brings to mind international trade rather than finance, however, both are interconnected in the economy. The current data shows that capital flow has grown at a higher rate than global aggregate exports over the past three decades. In 2012, $ 1.5 trillion in foreign capital flowed into emerging market, near or above the 2007 pre-crisis peak for many regions. These countries attracted 32 percent of global capital flows in 2012 (Figure VI).

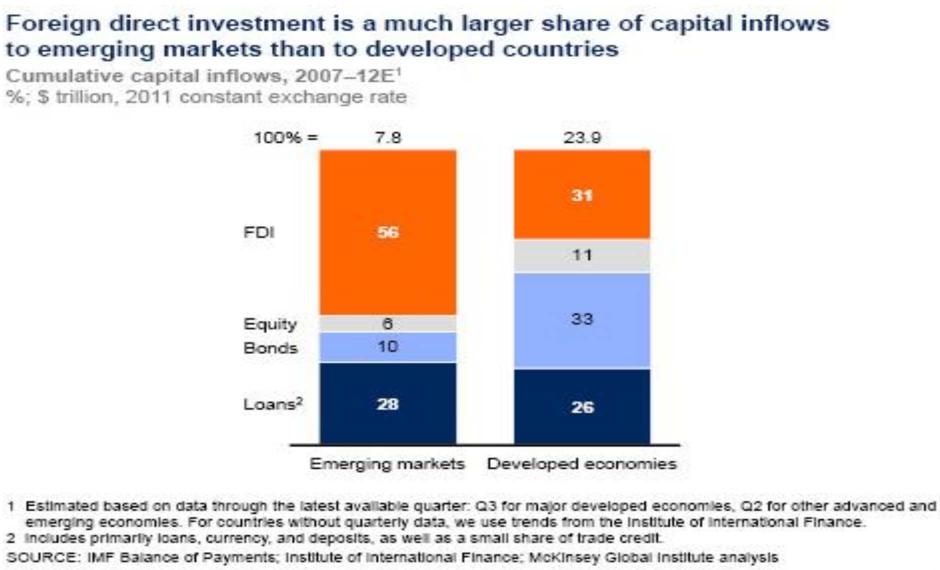
[58] Susan Lund and others (n 47) 16
[59] Hitesh Thakkar and Ranita Nagar (n 3) 155
[60] Charles Roxburgh and others, 'The emerging equity gap: Growth and stability in the new investor landscape' (December 2011). Report - McKinsey Global Institute <http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/emerging-equity-gap> accessed 07-Mar-16
[61] Susan Lund and others (n 47) 16

Figure VI: Capital inflow in developing countries post GFC



Foreign direct investment growth improves overall macroeconomics and political stability in emerging countries. In 2012, FDI accounted 53 % of capital inflows in emerging economies compared with 30 % in mature markets. The following figure VII describes the portfolio diversification of Emerging Markets and Developed economies. Despite the strong long-term growth prospects in the emerging market, the investors around the world underweight the assets of developing countries in their portfolios.[62]

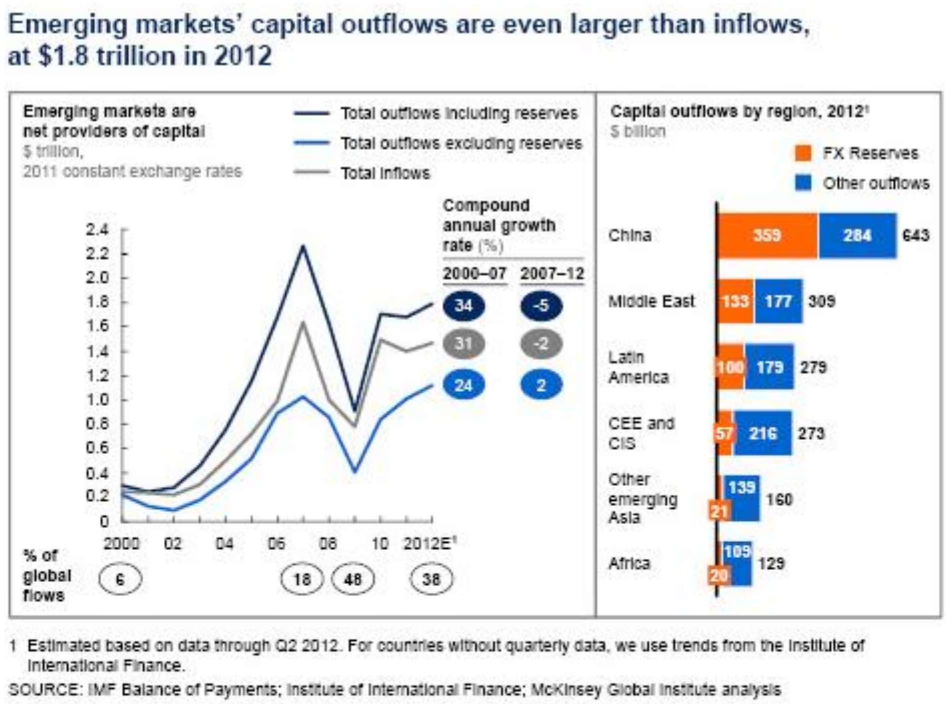
Figure VII: FDI share in Emerging market vs. Developed Economies



[62] ibid. 36

The developing countries capital outflow has grown more rapidly than inflows, totalling $ 1.8 trillion in 2012 (up from $ 295 billion in 2000). Foreign exchange (FX) reserves have been the fastest-growing component of foreign investment in developing countries. This volatility is not suitable for the long-term health of the global financial system.[63]

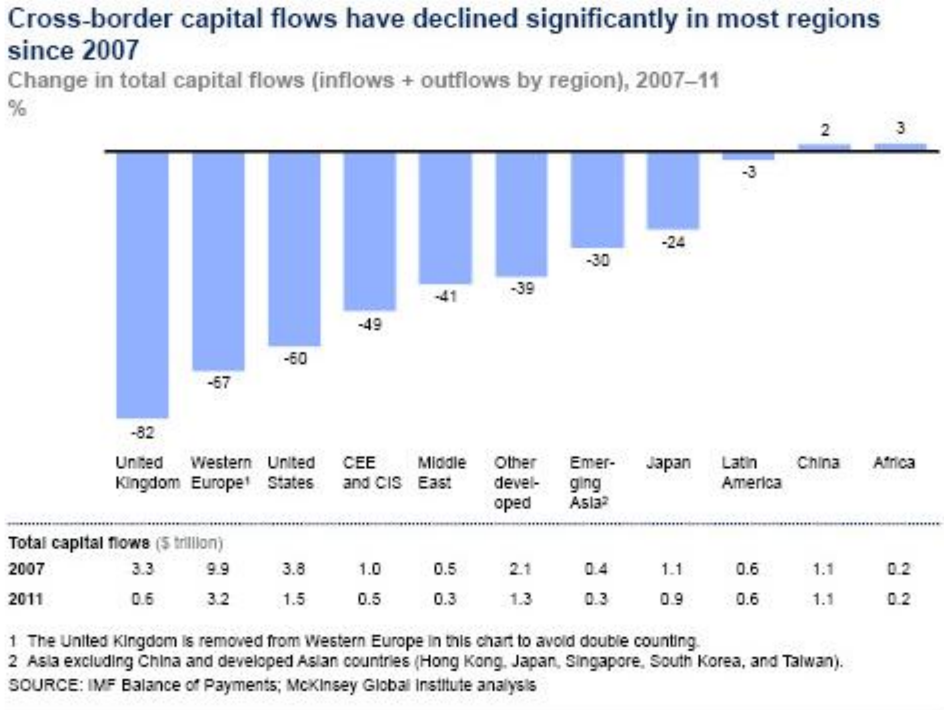
Figure VIII: Emerging market capital outflow larger than inflows



All advanced economies have seen a significant reduction in capital inflows and outflows. Whereas, the developing countries have maintained stability compared to the developed world. The following figure IX describes capital flow declined rapidly in most developed regions (Figure IX).[64]

[63] ibid. 37
[64] ibid.25

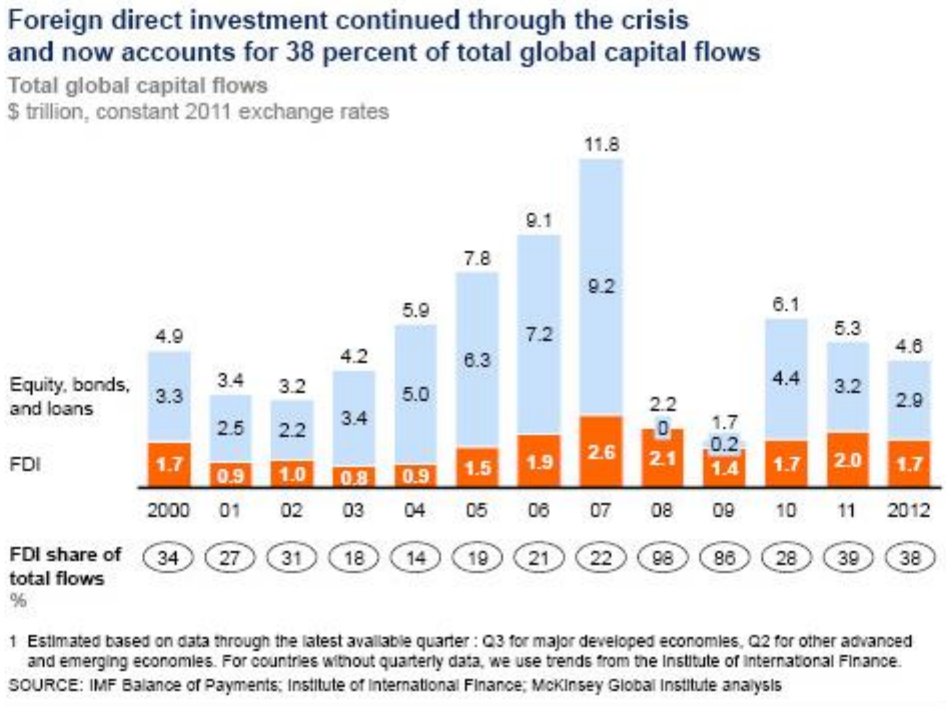
Figure IX: % change in total capital flow (2007-11)



FDI has consistently proven to be the least speculative form of capital in emerging markets and developed countries alike, reflecting the long-term nature of such investment. FDI is often driven by multinational companies as they seek to develop resources, build supply chains, or expand beyond saturated domestic markets to capture growth in developing economies. Companies do not undertake the decision to expand overseas lightly, and they typically make such commitments as part of long-term, multiplier strategy.[65] The increased role of FDI in financial globalization has a stabilizing influence on cross-border capital flows.[66] By contrast, cross-border lending has been the most volatile in bond and equity flows, especially in emerging economies.[67] The following figure X illustrates the consistency and certainty of FDI flow in comparison with other flows.[68]

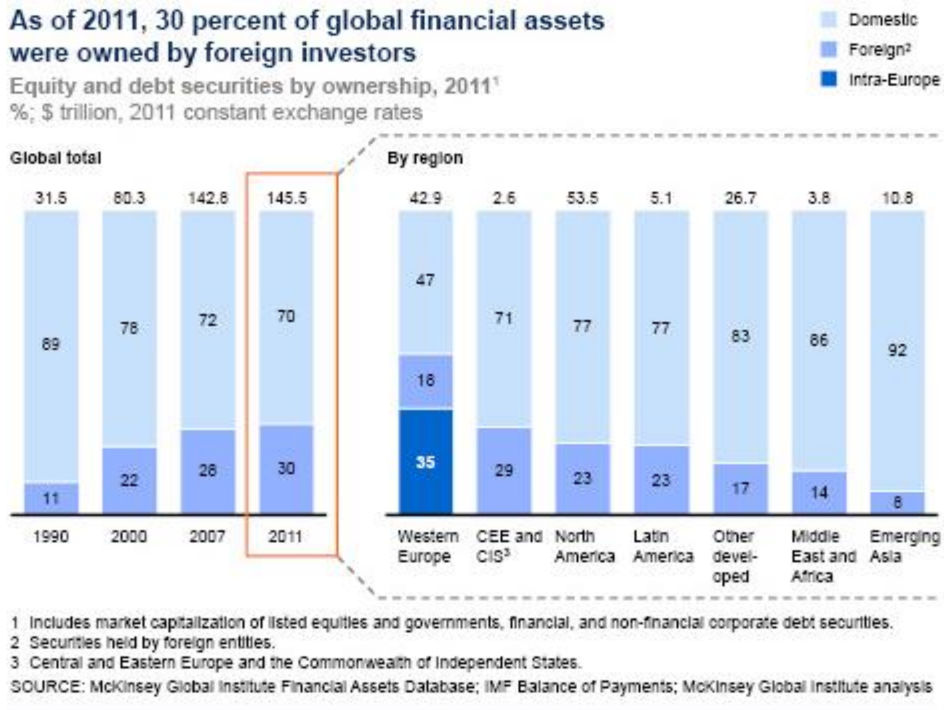
[65] Carmen Broto, Javier Diaz-Cassou, and Aitor Erce, 'Measuring and explaining the volatility of capital flows to emerging countries' (2011) 35(8) Journal of Banking & Finance , 1941
[66] ibid.
[67] ibid.
[68] Susan Lund and others (n 47) 40

Figure X: Stable and consistent FDI during GFC



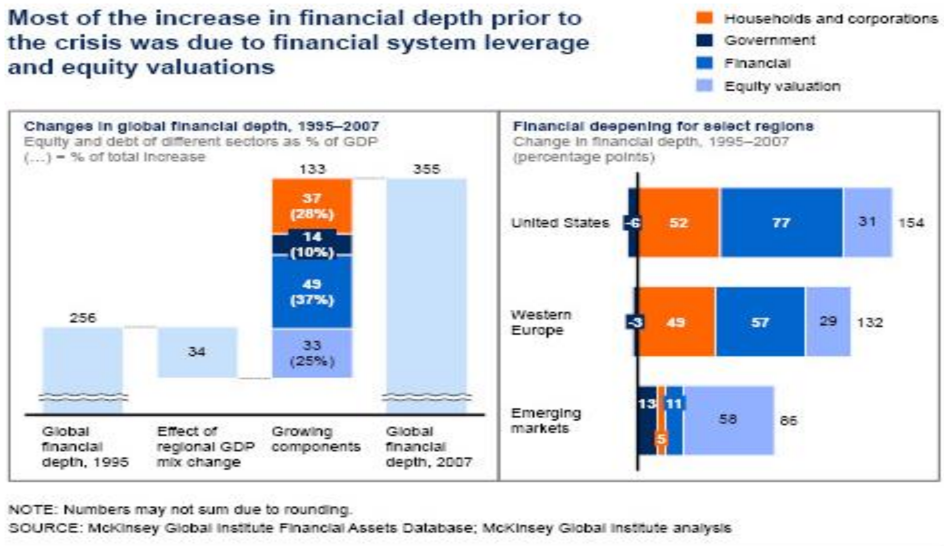
Portfolio investment in foreign equities and bonds continued to grow. The foreign investor owned 30 % of world's equity and bonds, however, their share varied across countries. The global financial system provided financial innovation and investment without streamlining GFRS. There was the need for macro-prudential regulator to balance and institutionalize global financial regulatory mechanism.

Figure XI: Percentage of global financial asset owned by foreign investors



Separate insturments of financing is available for Households and corporations, financial institutions, and government sectors. The following figure XII reveals that the financial sector accounted for 37% of global financial deepening before the crisis. Bonds and other debt securities issued by financial institutions to fund their lending activities and other asset purchases grew at an annual rate of 11 percent between 1995 to 2007, reaching $ 39 trillion by 2007, around five times the total bonds issued by corporations and even larger than the sovereign bond market in 2007.

Figure XII :Increase in financial depth before GFC



Financing to households and corporation accounted for just over one-fourth of the rise in global financial depth between 1995 and 2007. Hence, it was surprising that the sector's share reflected substantial increases, in the volume of mortgage lending, during the housing bubble in several economies.

5.1. Simple test of Financial Integration

The emerging economies are more closely integrated with the international financial system currently.

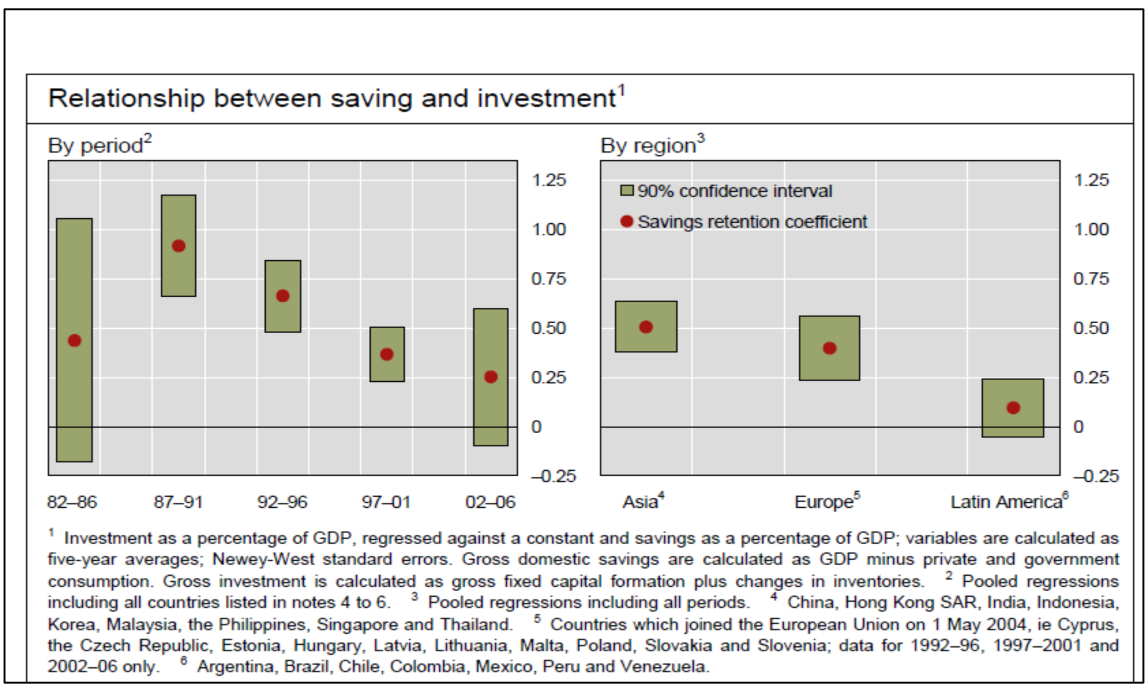
There is no single indicator that captures all aspects of integration. In general, the financial system can be considered fully integrated when the law on one price prevails. This implies that the asset reflects identical risks and returns and command the same price. Also, assets are perfectly mobile. In the process of Financial integration, the risk-adjusted expected rates of return would tend to equalise across countries. The proposed simple test of financial integration is :[69]

$$\left(\frac{INV}{GDP}\right)_{i,t} = \alpha + \beta\left(\frac{SAV}{GDP}\right)_{i,t} + \varepsilon_{i,t}$$

[69] Alicia García-Herrero and Philip Wooldridge (n 1) 60

where I represents the country, and t is the time period. The coefficient β shows what proportion of a change in the domestic saving rate is retained in the country to finance investment. The data was collected for 26 emerging economies (9 from Asia, 10 from Europe, and 7 from Latin America) over the period 1982-2006. To control cyclical fluctuations, the averaged saving and investment rates over five-year intervals were used. The resulting coefficient β is plotted in figure XIII for different periods and different emerging economies. For the full sample of emerging markets, the savings retention coefficient rose during the 1980s, reflecting the decline in capital flows to emerging markets after the 1982 debt crisis (Figure XIII). It fell sharply during the 1990s, from 0.92 in 1987–91 to 0.37 in 1997–2001, and then declined further to 0.25 in 2002–06. The most recent estimates are still well above the savings retention coefficient for mature economies, which was calculated to be about zero in 2002–06, and so emerging economies are not yet as integrated into global financial markets as are mature economies. Among emerging regions, the savings retention coefficient is lowest in Latin America, where it is close to zero over the full sample period. In Europe, it is around 0.4, and in Asia 0.5.[70]

Figure XIII : Relationship between Saving and Investment



[70] ibid.

5.2 Global Versus Regional Integration

The discussion above has given little regard to the geographical reach of financial integration and now the study focuses on the closeness of financial links between emerging markets and three different groups of countries, i.e., other emerging markets within the same region, mature economies neighbouring the region, and major financial centres farther afield. The first set of links, among emerging markets within the same region, represents regional integration in the narrowest sense. The second set, with neighbouring economies, can also be considered regional integration, but in a broader sense. The third group covering major financial centres, will be referred to as global integration.

Considering the price-based indicators, the study proposes a decomposition of individual country returns into, what can be attributed to a global risk factor and what can be attributed to a regional risk factor. Decompositing the return on country i's bonds into three parts: the return on a global bond index (RG,t), the excess return on a regional bond index (ERR,t, measured as the difference between regional and global returns), and a country-specific error term (εi,t):

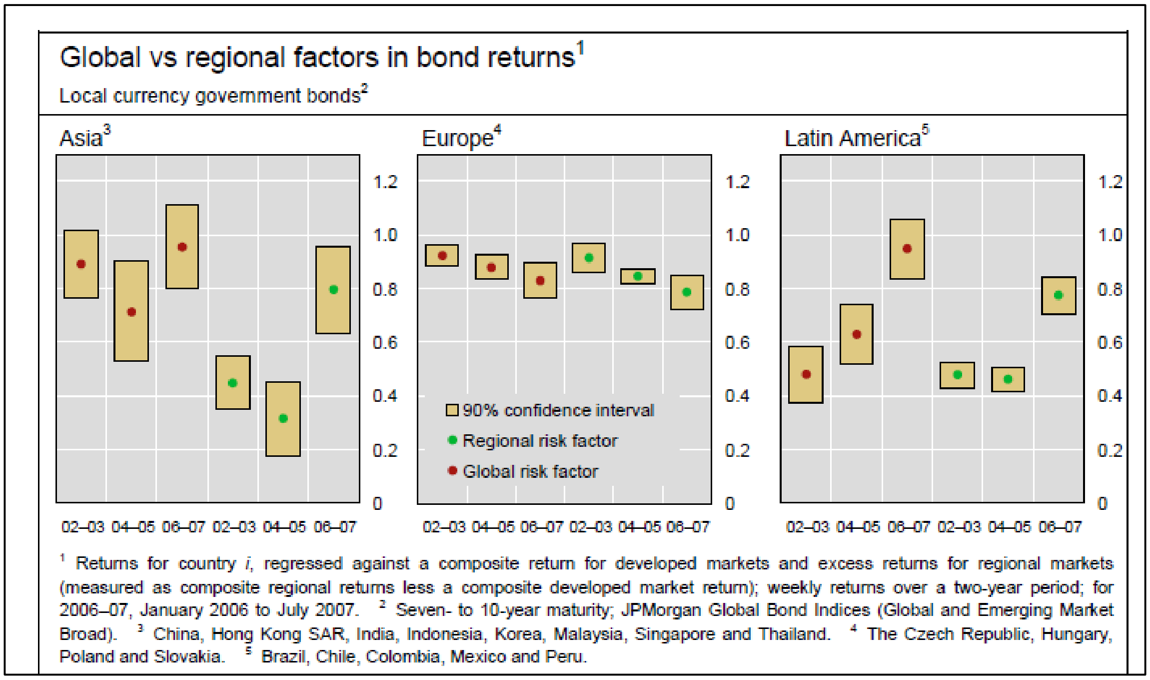
$$R_{i,t} = \beta_1 R_{G,t} + \beta_2 ERR_{,t} + \varepsilon_{i,t}$$

The coefficient β_1 captures non-diversifiable risk related to global economic and financial conditions, and so a higher β_1 can be interpreted as indicating greater global integration. The coefficient β_2 is a region-specific factor. If β_2 exceeds zero, it indicates that investors can and do diversify their portfolios across the region, suggesting a degree of bond market integration within the region unrelated to global integration. Graph XIV shows the results of the decomposition, using weekly data for local currency government bonds.

The size of the global risk factor in bond returns did not change significantly between 2002 and 2007 in Europe and Asia but did increase in Latin America. The regional risk factor is significant in all three regions, becoming more so in Asia and Latin America since 2004.

The increase in these latter two regions implies that regional integration has facilitated the diversification of idiosyncratic country risk.[71]

Figure XIV: Global vs. Regional factors in bond return [72]



6. Global Financial Integration: Data Analysis and Trends

Joint External Debt Hub: World Bank, IMF, BIS, and OECD together jointly work on International Debt Statistics

Sample Countries: Emerging Countries – India, China, Brazil, Indonesia, South Africa

Developed Countries – USA, UK, Japan, Germany, France

Two Time Interval: 1995 to 2004 and 2004 to 2013

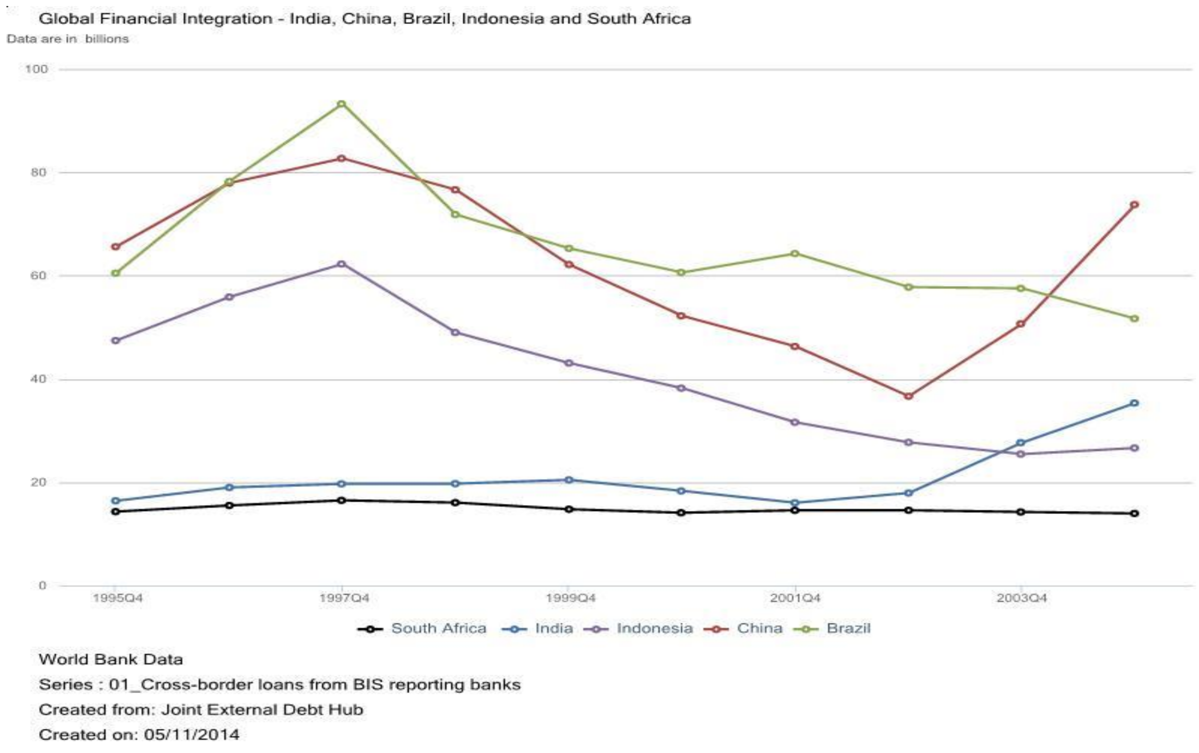
6.1. Cross Border Loans from BIS reporting Banks:

[71] ibid.64
[72] ibid.65

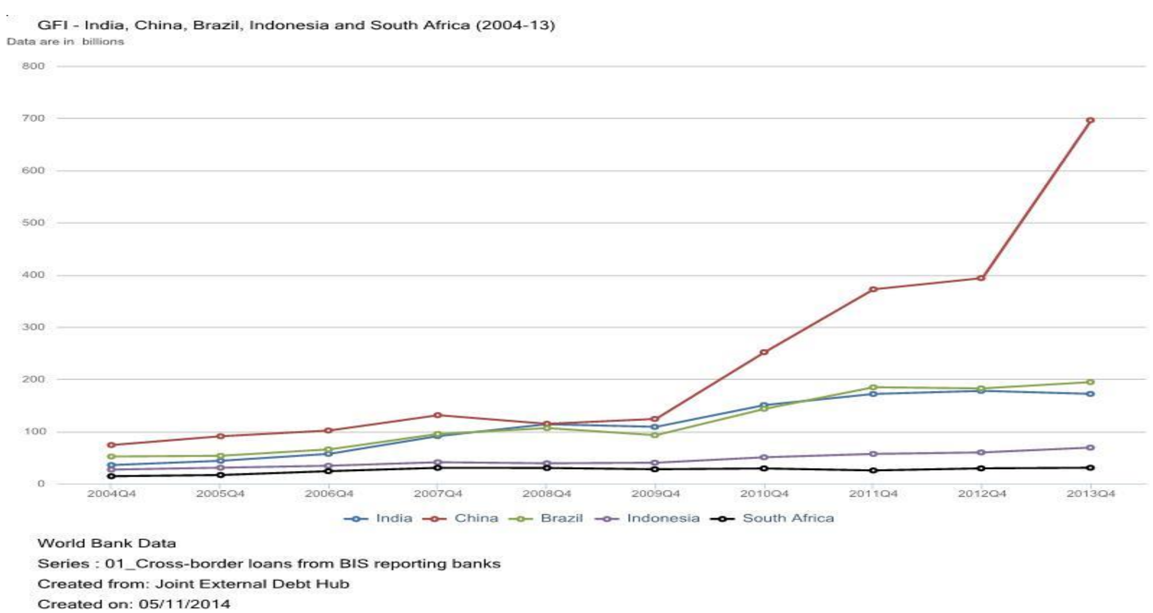
6.1.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.A: Cross Border Loans from BIS reporting Banks

1995 to 2004



2004 to 2013



1995 to 2004: In Brazil, China and Indonesia the cross-border loan from BIS reporting banks increased, in absolute value from 1995 to 1997, whereas in India and South Africa, Cross Border Loans from BIS reporting Banks has increased at a marginal rate. In Brazil and Indonesia, after 1997 onward, it started to decline until end of 2004. China's cross-border loan declined from 1997 to 2002 and recovered from 2003 onwards. India's cross-border loan trend was static till 2002, after which it increased onwards till end of 2004, whereas in South Africa the overall cross-border loan trend was constant.

In Indonesia and Brazil cross-border loan from BIS reporting bank has reduced in post-Asian Crisis and Argentinean crisis.

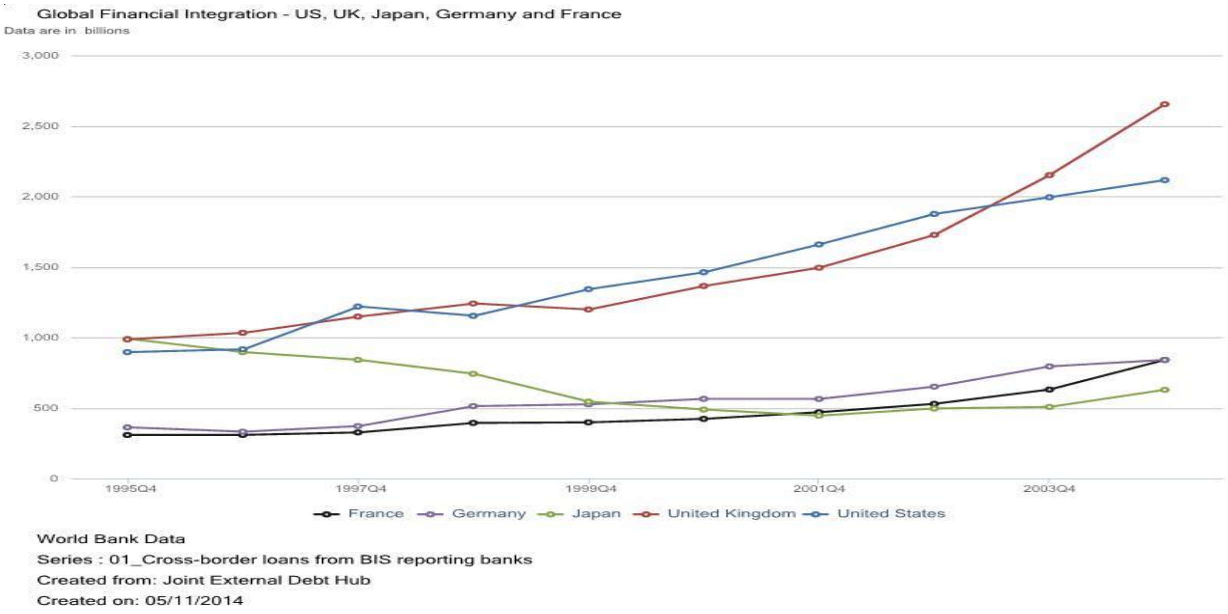
2004 to 2013: In the case of India, Brazil, Indonesia and South Africa, cross-border loans have increased gradually until 2013 but ***in 2009 cross-border loan reduced in the sample countries***. China's CBL increased till 2009 but post 2009 it has risen rapidly and stood at 700 billion at the end of 2014, which cannot be compared with sample countries.

Herrmann and Mihaljek's (2013)[73] research stated that there was a decrease in cross-border BIS loan in the 2007-08 crisis in World Economy and a reassessment of risk in global financial markets was the most important channel for spill-over in cross-border lending. The exposure of banks in lender countries to a primary crisis country significantly reduced cross-border lending to emerging Market economies.[74] C.P. Chandrasekhar (2008),[75] showed the outstanding values of all kinds of international assets held by banks doubled in 2003-2007.[76]

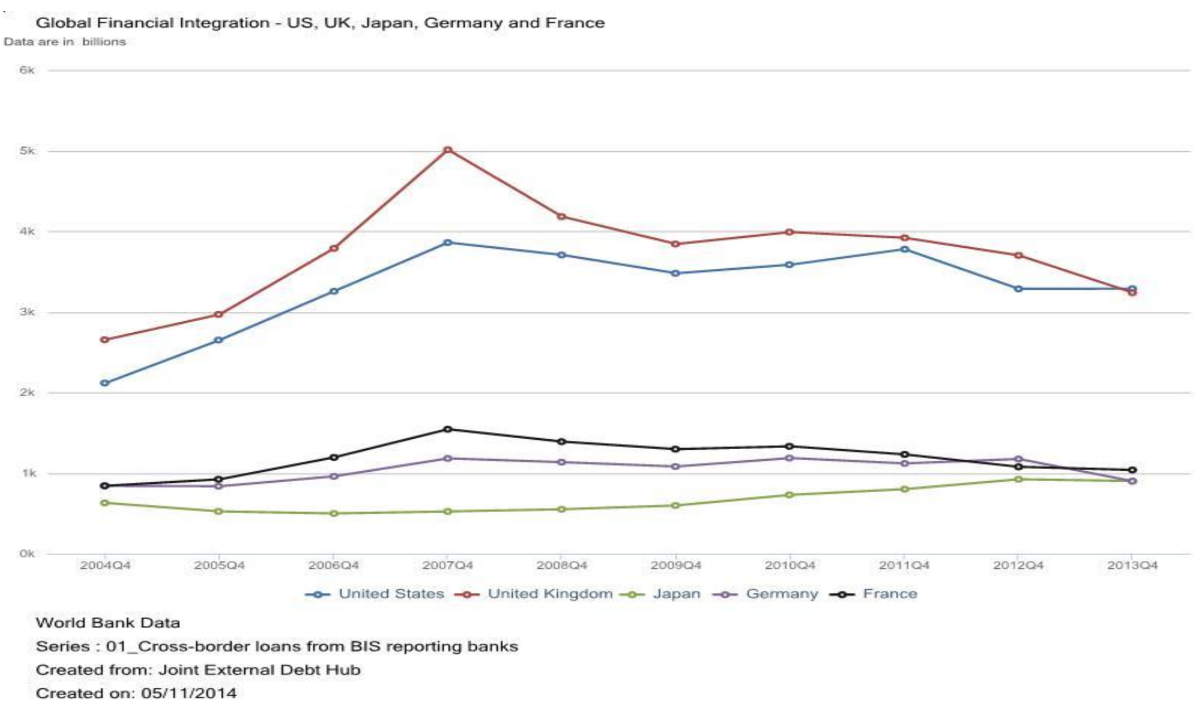
[73] Sabine Herrmann and Dubravko Mihaljek, 'The determinants of cross-border bank flows to emerging markets: new empirical evidence on the spread of financial crises' [2010] BIS Working Papers No 315, Monetary and Economic Department , 10 <http://unctad.org/en/Docs/gdsmdpg2420083_en.pdf> accessed 06-Mar-16
[74] ibid.
[75] C.P. Chandrasekhar, 'Global Liquidity and Financial Flows to Developing Countries: New Trends in Emerging Markets and their Implications' [2008] G-24 Discussion Paper Series, No 52, United Nations , 7 <http://unctad.org/en/Docs/gdsmdpg2420083_en.pdf> accessed 06-Mar-16
[76] ibid.7

6.1.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004



2004 to 2013



1995 to 2004: Comparing the data of emerging countries with sample developed countries does not reveal much. However, the absolute value of the loan is significantly high in developed countries in comparison to sample emerging countries. The data analysis of sample developed countries trends were similar**. *It was a volatile trend in the period of 1997 to 1999 in the sample developed countries***. From 1999 onwards, CBL trends were rising in all sample countries (except Japan) but in USA and UK, it increased sharply. The data has also interpreted that Japan was a large surplus fund economy, and it engaged in cross-border loans to countries, its CBL was reduced due to adequate of funds. Moreover, the cross-border ***loans are taken for long-term development purpose which is less toxic in nature***.

2004 to 2013: Excluding Japan, cross-border loan in the other four countries increased from 2004 to 2007. In the context of GFC (2007-10), the cross-border loan declined to all countries in that period. This reflects a direct impact of the crisis on four countries because their financial sector was integrated with one another.

Based on BIS Quarterly Review (September 2013),[77] the decline in cross-border claims on developed countries mainly reflected further contractions in interbank lending after post-crisis period. According to the locational banking statistics by residence, claims on banks and related offices in developed countries reduced by $328 billion (2.4%) between end-2012 and end-March 2013.[78]

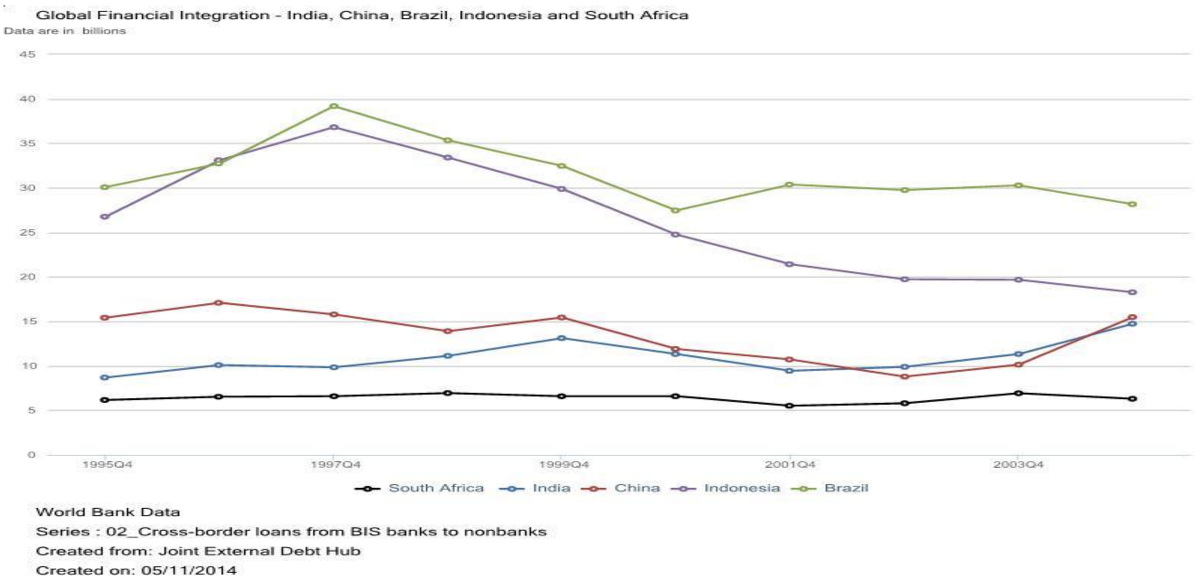
[77] BIS, 'Highlights of the BIS international statistics' (September 2013). BIS Quarterly Review , 14 <http://www.bis.org/publ/qtrpdf/r_qt1309b.pdf> accessed 06-Mar-16
[78] ibid. 14

6.2. Cross-border loans from BIS banks to non-banks: (CBL NB)

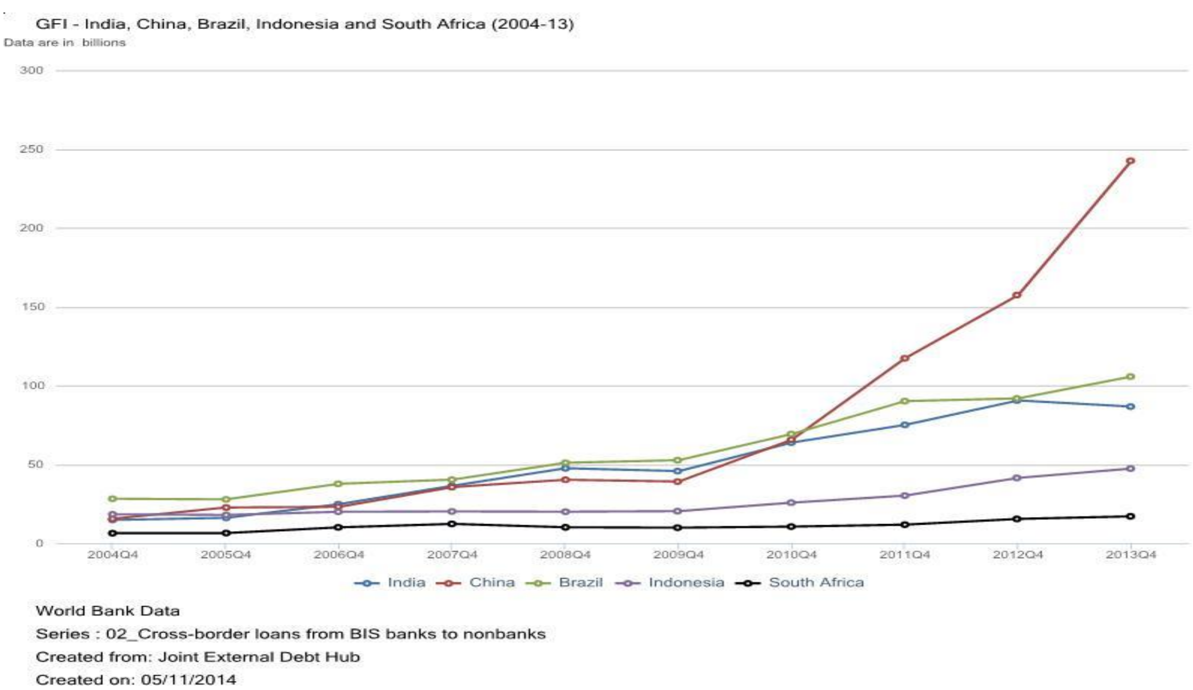
6.2.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.B: Cross-border loans from BIS banks to non-banks: (CBL NB)

1995 to 2004



2004 to 2013



1995 to 2004:

In Brazil and Indonesia, CBL BIS banks to non-banks rose and reached to a peak in 1997, after which it revealed a declining trend till the end of 2004***(due to the direct impact of crisis Asian Crisis and Argentinean crisis)***. In India, China and South Africa, trends were volatile in nature.

2004 to 2013:

In the case of India, Brazil, Indonesia and South Africa, cross-border loans from BIS banks to non-banks increased gradually with moderate rate till 2013 but ***in 2009 cross-border loan reduced in the sample emerging countries due to Global financial crisis***. China's CBL rose at a high rate.

6.2.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

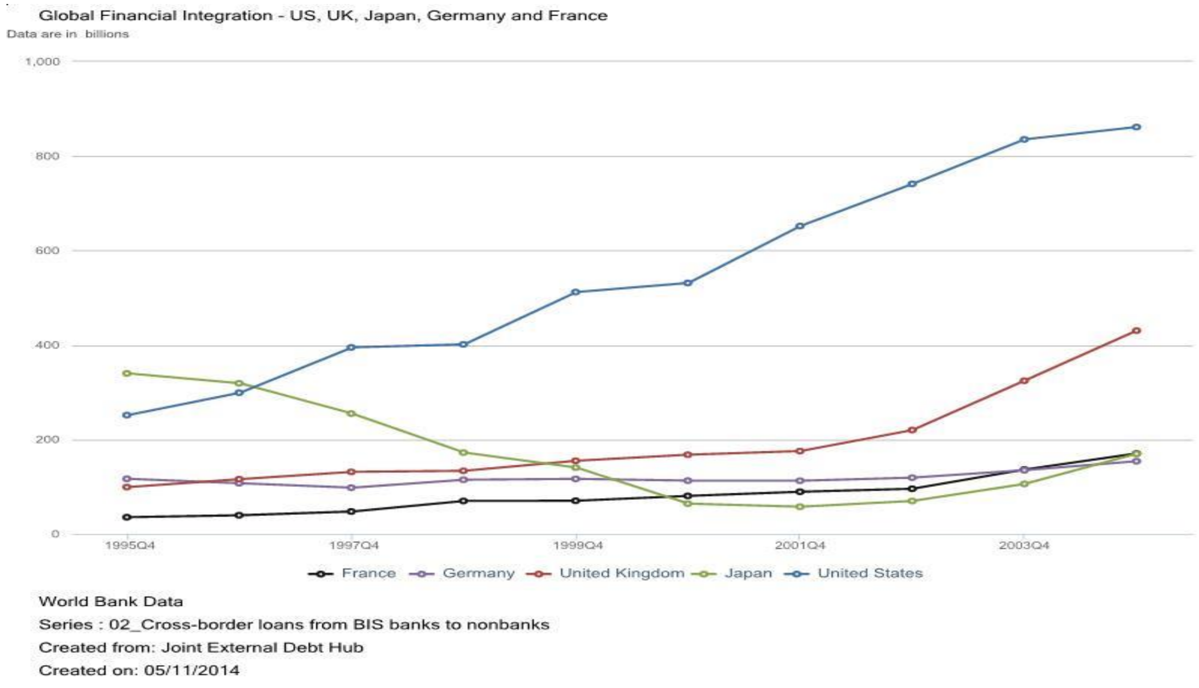
The total value of cross-border loan is high for the sample developed countries compared to emerging countries in absolute value. Excluding Japan, the CBL NB of other four countries increased at a nominal rate, ***but it was volatile in the period of 1998-1999.*** The CBL NB reduction in Japan was due to current account surplus.

2004 to 2013

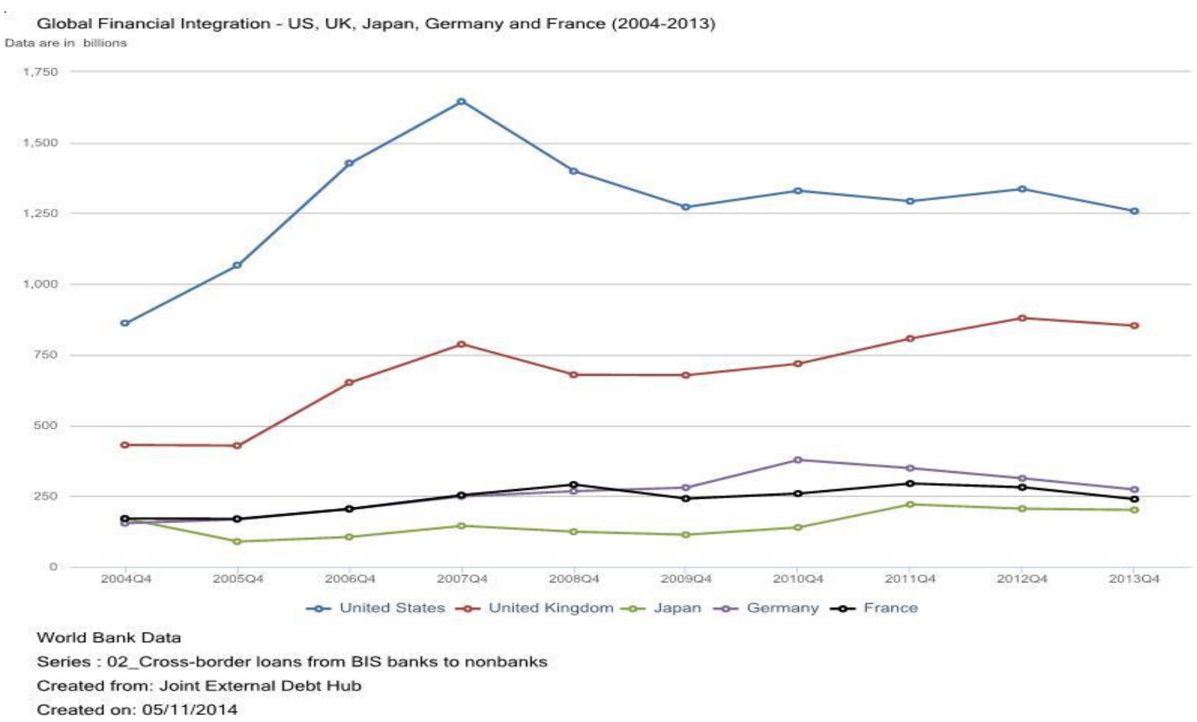
In the sample developed countries, CBL NB increased till 2007 and also reached a peak in the same period. From 2007 to 2009, CBL NB declined in all countries in that period. ***This was due to the impact of GFC on four developed countries.***

Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004



2004 to 2013

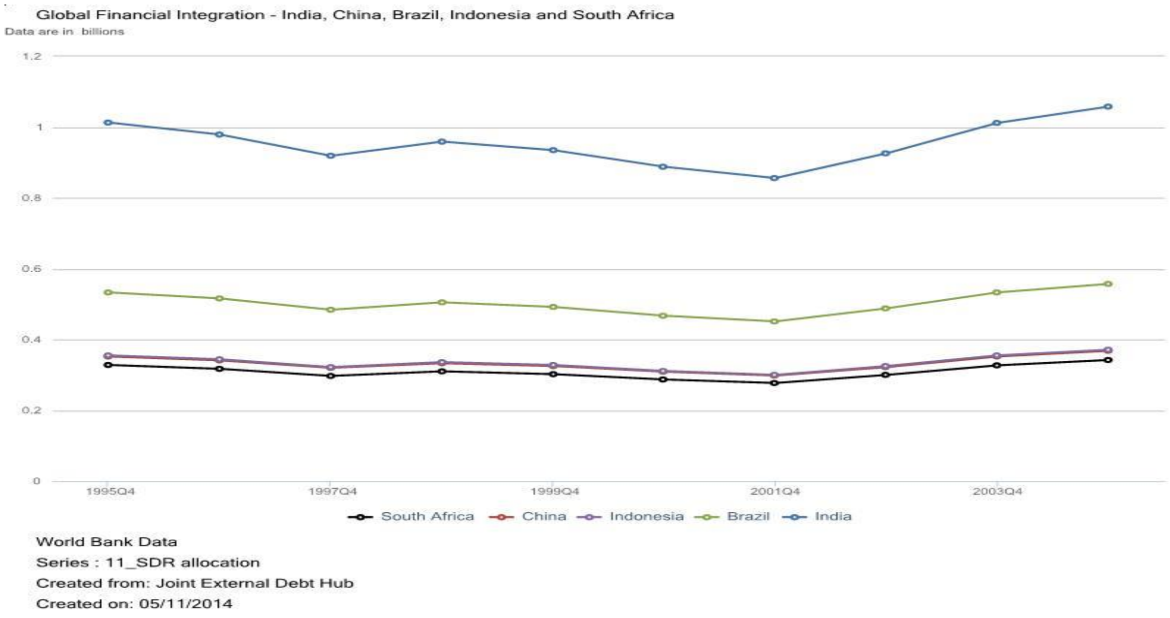


6.3. SDR Allocation:

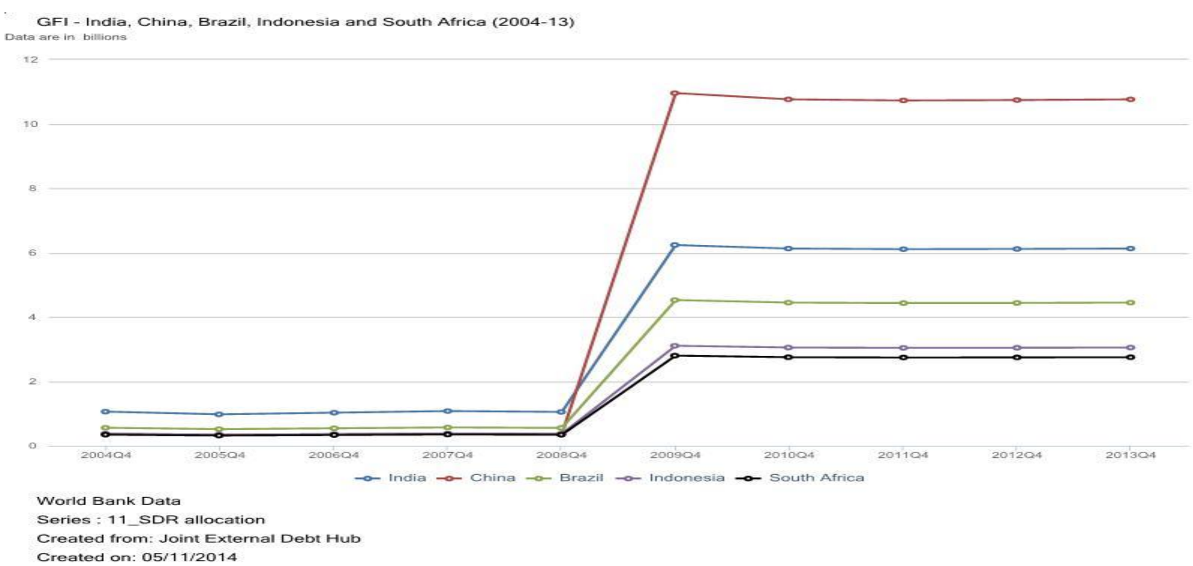
6.3.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.C: SDR Allocation

1995 to 2004



2004 to 2013



1995 to 2004 & 2004 to 2013:

Emerging Countries – India, China, Brazil, Indonesia, South Africa

Developed Countries – USA, UK, Japan, Germany, France

The SDRs is stable stock which does not change in the backdrop external shocks***. However, due to GFC, the volume of SDRs was increased from 2009 onwards (4th Amendment) and***, its general allocation was equivalent to about US $250 billion[79] effective from 2009 onwards.[80]

India's SDR was higher until 2008, after which, China's SDRs surpassed all the sample developing countries' in 2013.

The SDRs increased significantly in the USA compared to other sample developed countries.

SDR is neither currency nor a claim on the IMF. It is a potential claim on the freely usable currencies of IMF Members.[81] The general allocation of SDR is based on long-term global needs to supplement existing reserve assets and allocation was made three time in 1970-72, 1979-81 and 2009.[82]

Generally, SDRs is not a speculative flow, however, issuing more volume of SDR's allocation creates new dimension of volatility and uncertainty in SDR's market

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[79] IMF, 'SDRs: General and Special SDR Allocations' (9 September 2009) <https://www.imf.org/external/np/tre/sdr/proposal/2009/0709.htm> accessed 06-Mar-16

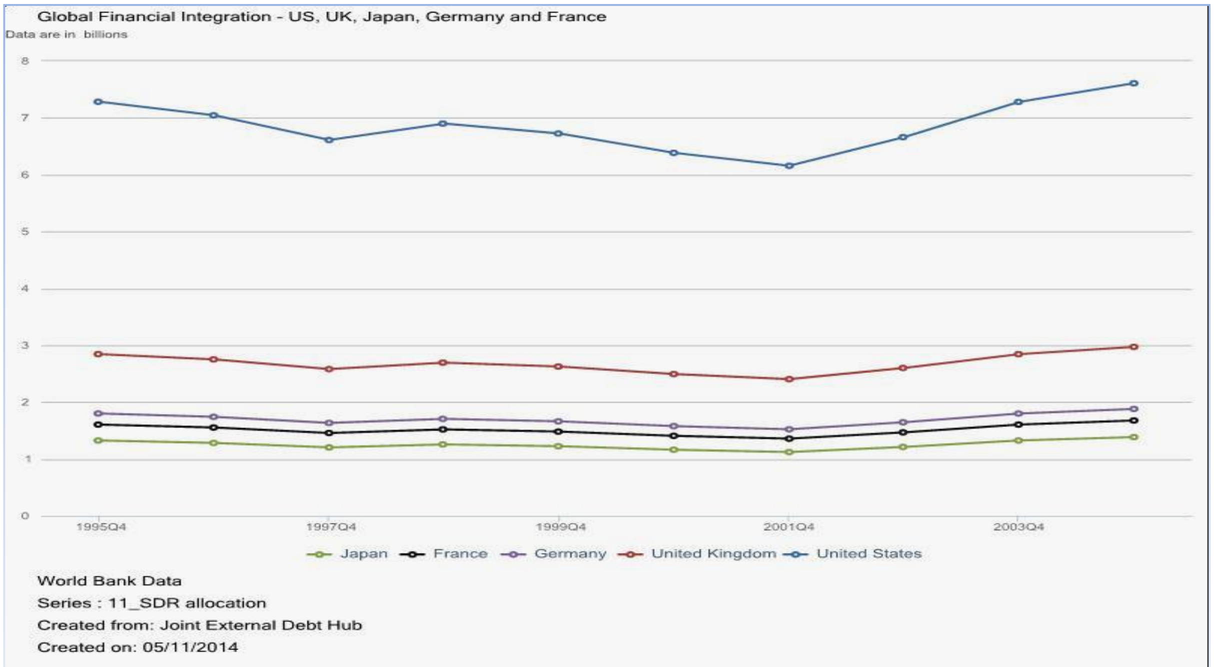
[80] IMF, 'IMF Resources and the G-20 Summit' (5 August 2013) <https://www.imf.org/external/np/exr/faq/sdrfaqs.htm#q5> accessed 06-Mar-16

[81] Maurice Obstfeld, 'The SDR as an International reserve asset : What future ?' [2011] International Growth Centre, Rapid Response 11/0885 , 3 <http://eml.berkeley.edu/~obstfeld/SDR_Obstfeld.pdf> accessed 06-Mar-16

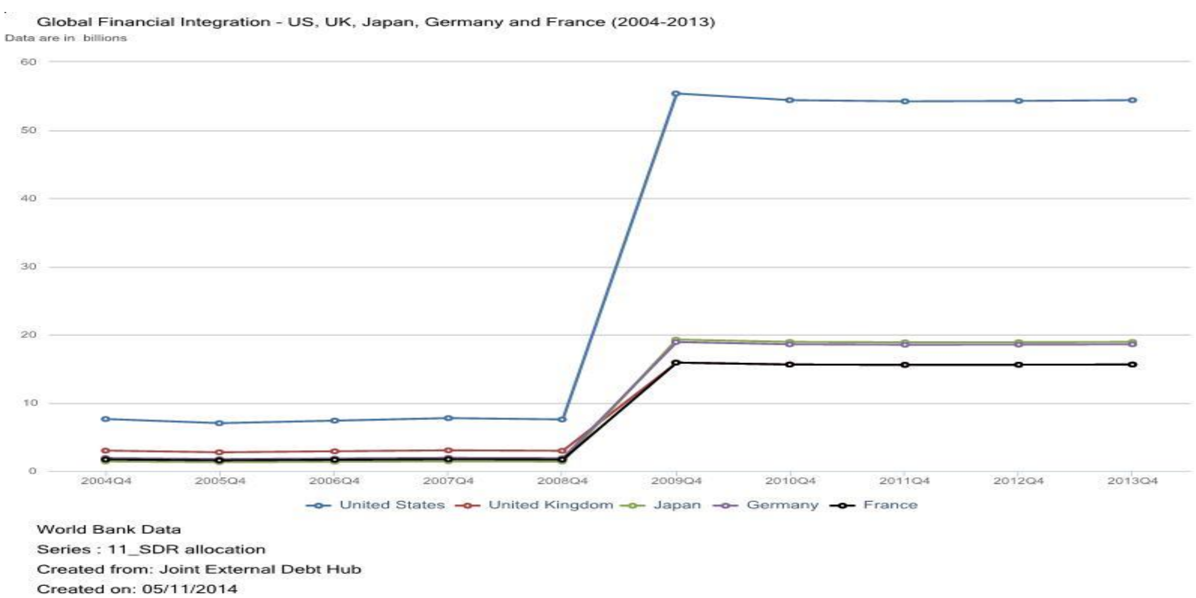
[82] Kathryn M.E. Dominguez, Yuko Hashimoto, and Takatoshi Ito, 'International Reserves and the Global Financial Crisis' [2011] National Bureau of Economic Research NBER Working Paper No 17362 , 10

6.3.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004



2004 to 2013

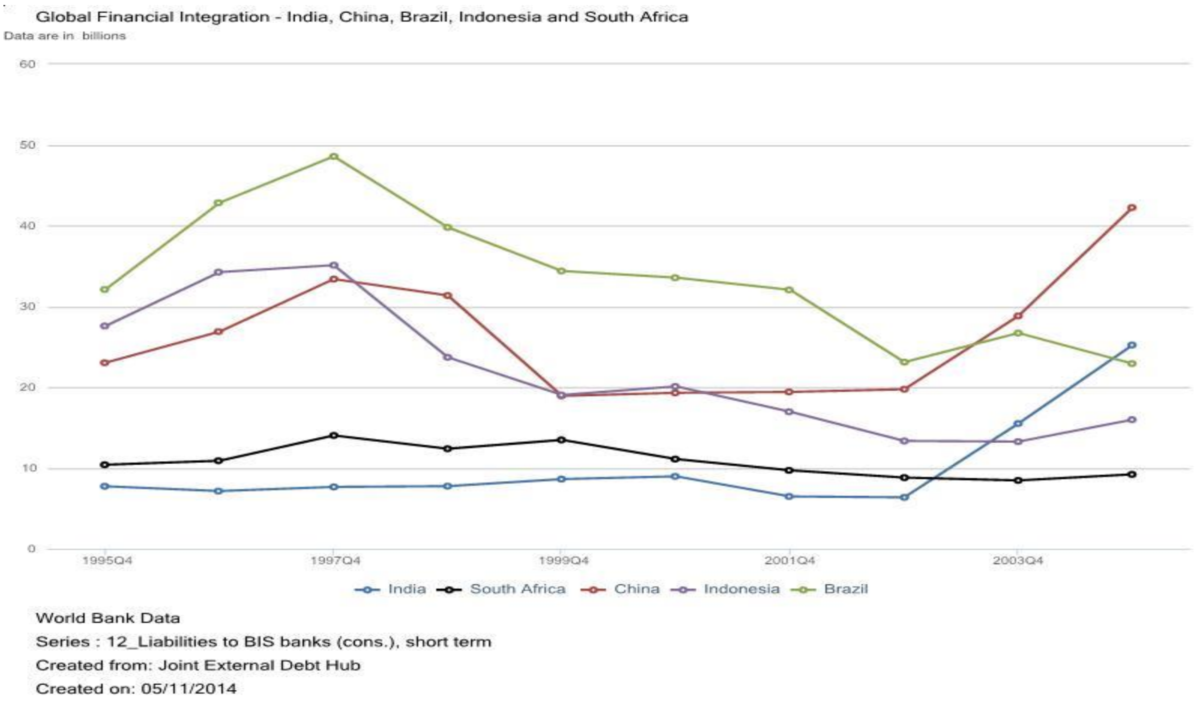


6.4. Liabilities to BIS (Cons.), short term

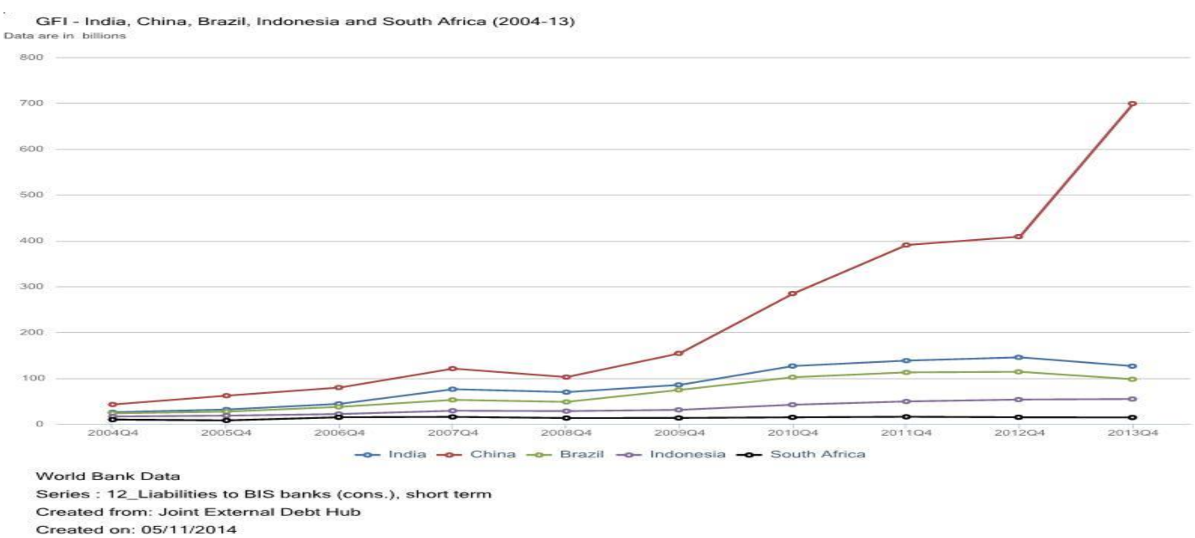
6.4.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.D: Liabilities to BIS (Cons.), short term

1995 to 2004



2004 to 2013



BIS Consolidated Banking Statistics (CBS) comprises data on gross consolidated claims of banks resident in the CBS reporting. The key organizational criteria is the consolidation principle in which participating banks report contractual and ultimate risk lending by the head office and all its branches and subsidiaries, on a worldwide consolidated basis with inter-office accounts being netted out.

1995 to 2004:

LB ST increased in Brazil, Indonesia and China from 1995 to 1997, attained its height in 1997, but ***it started to decrease from 1998 onward till 2002*** whereas in India and South Africa, there was nominal variation in LB ST till 2002. After 2002, LB ST increased gradually in sample emerging countries and China's and India's growth in LB ST was higher compared to sample countries.

2004 to 2013:

LB ST was volatile during the 2006 to 2008 period in sample emerging countries. From 2008 onwards, it reflected increasing trend, whereas, in China, it increased rapidly.

Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

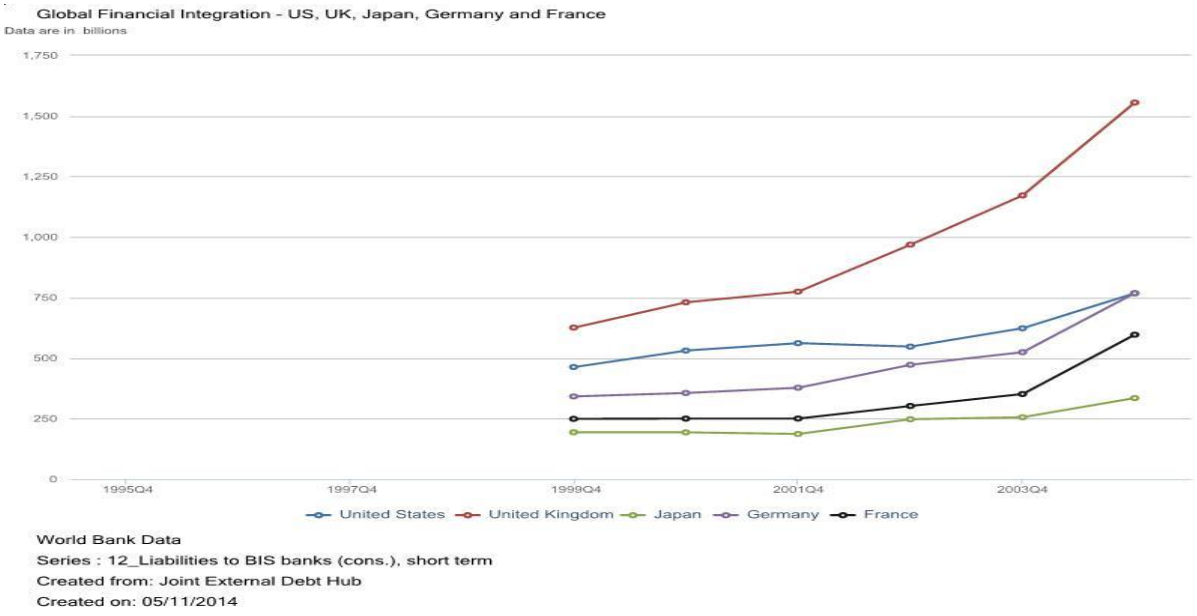
In the sample developed countries, LB ST increased. However, in the USA, it increased at a higher rate compared to other sample developed countries from 1999 to 2004. The data for 1995-1998 is not available in this analysis.

2004 to 2013:

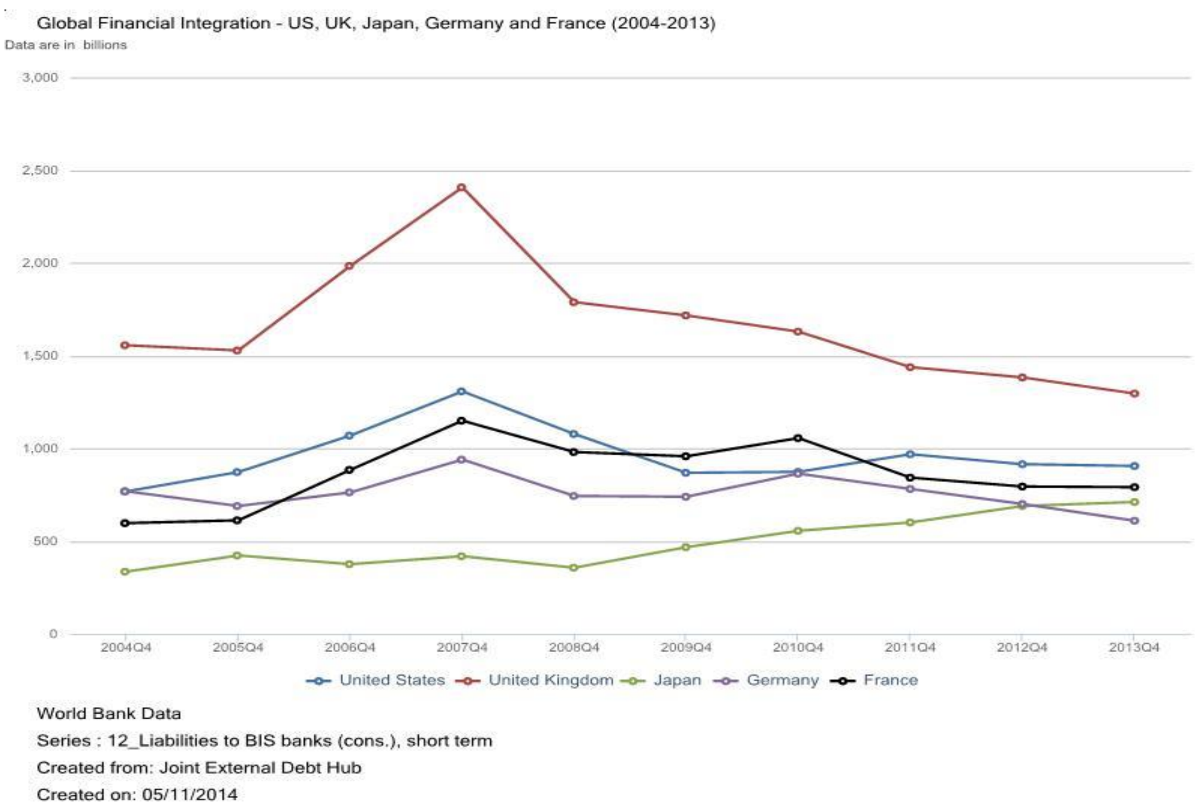
In sample developed countries, LB ST increased till 2007, and from 2008 onwards it declined in sample developed countries (excluding Japan) which may be due to GFC. However, in Japan, from 2008 onwards, LB ST increased till 2013.

6.4.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004



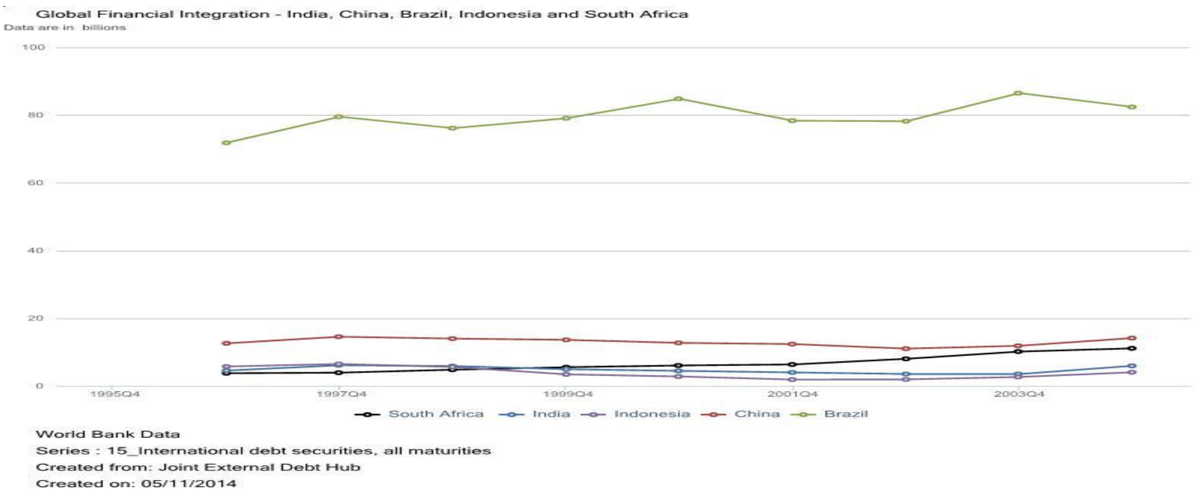
2004 to 2013



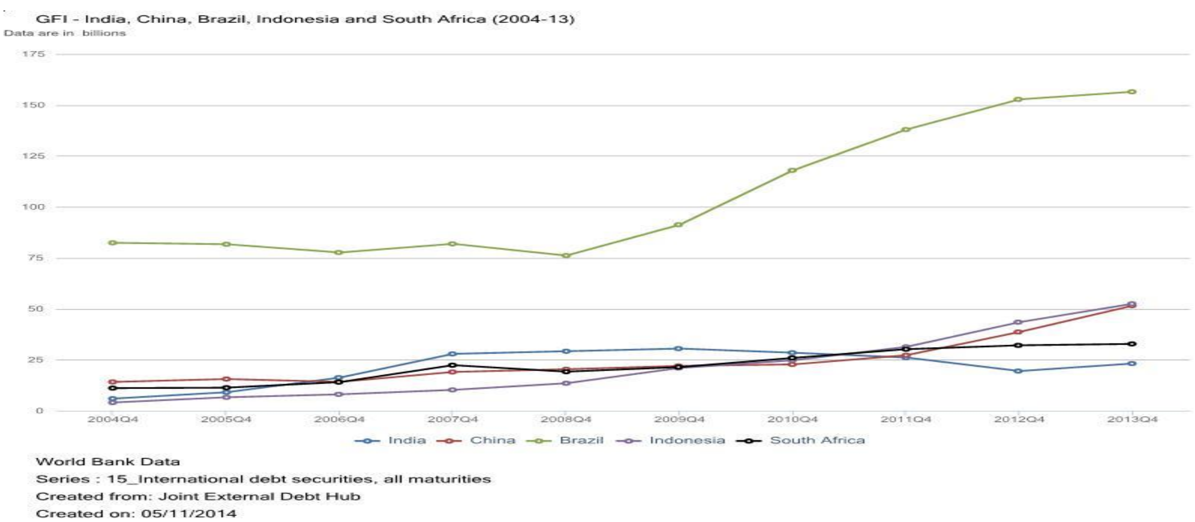
6.5. International Debt Securities, all Maturities

6.5.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.E: International Debt Securities, all Maturities



2004 to 2013



International debt securities cover all foreign currency issued by residents and non-residents in a given market, including in the borrower's own currency, and foreign bonds (domestic currency bonds issued by non-residents in a given market)[83]. The international

[83] Joint BIS-IMF-OECD-WB External Debt Hub (JEDH), 'Creditor/Market Tables Metadata' (28 September 2015) <http://www.jedh.org/jedh_metadata-line%20items.html> accessed 07-Mar-16

securities statistics[84] exclude all domestic currency issued by residents targeted to their own national market, whether purchased by residents or non-residents. [85]

1995 to 2004:

IDS AM was volatile in the period of 1997 to 2001 in the sample emerging countries, and its magnitudes were high in Brazil. It was consistently volatile over the given period.

2004 to 2013:

IDS AM increased till 2007, and then ***it was volatile and reflected a decreasing trend from 2008 till 2010.*** After 2010 till 2013, increasing trends is reflected in sample developing countries. Brazil's IDS AM continued to increase rapidly from 2008 onwards.

6.5.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

IDS-AM market, reflected an increasing in trend in USA, UK, Germany and France, whereas continuous decreasing trend with a low rate in Japan was reflected over the period of 1995-2003. ***From the given data analysis, it can be said that 1997 crisis showed impact on the sample developed countries in the IDS AM market.***

2004 to 2013:

U.K's IDS-AM increased sharply in the 2004-2009 period, US's IDS-AM increased till 2007 and decreased till 2013, whereas in Germany and France, small ups and downs were reflected, and Japan's IDS-AM was constant through the period. ***Apart from Japan, IDS-AL was volatile in the period of 2008-2010 in the other sample developed countries.***

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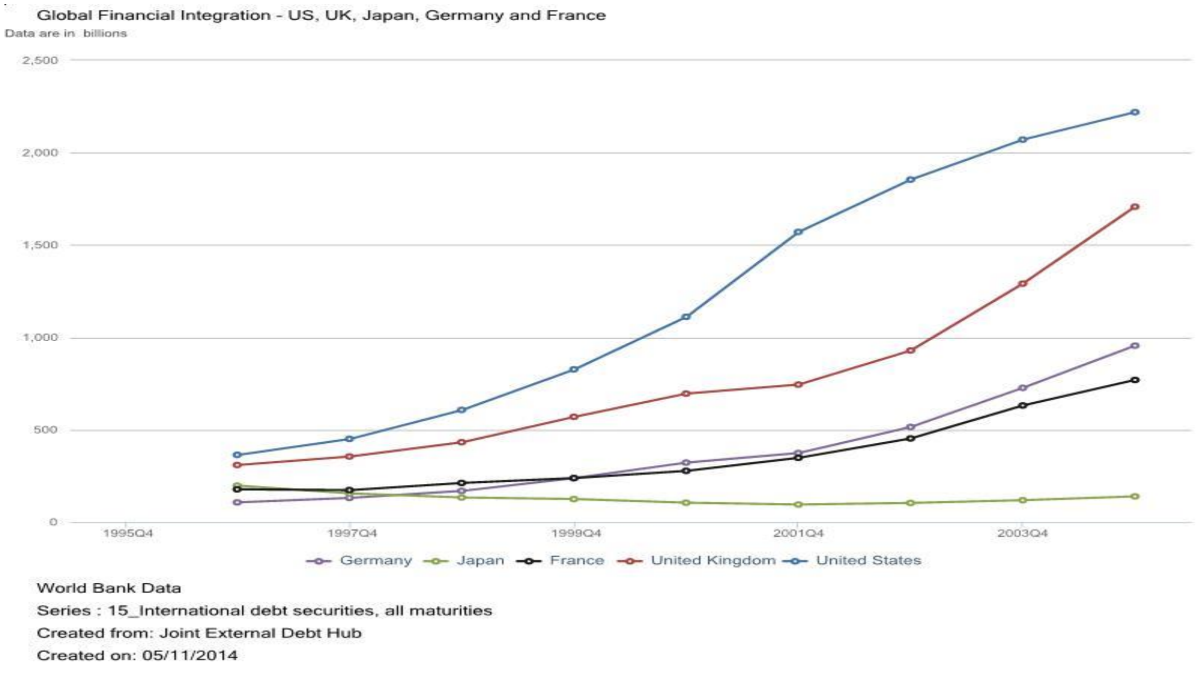
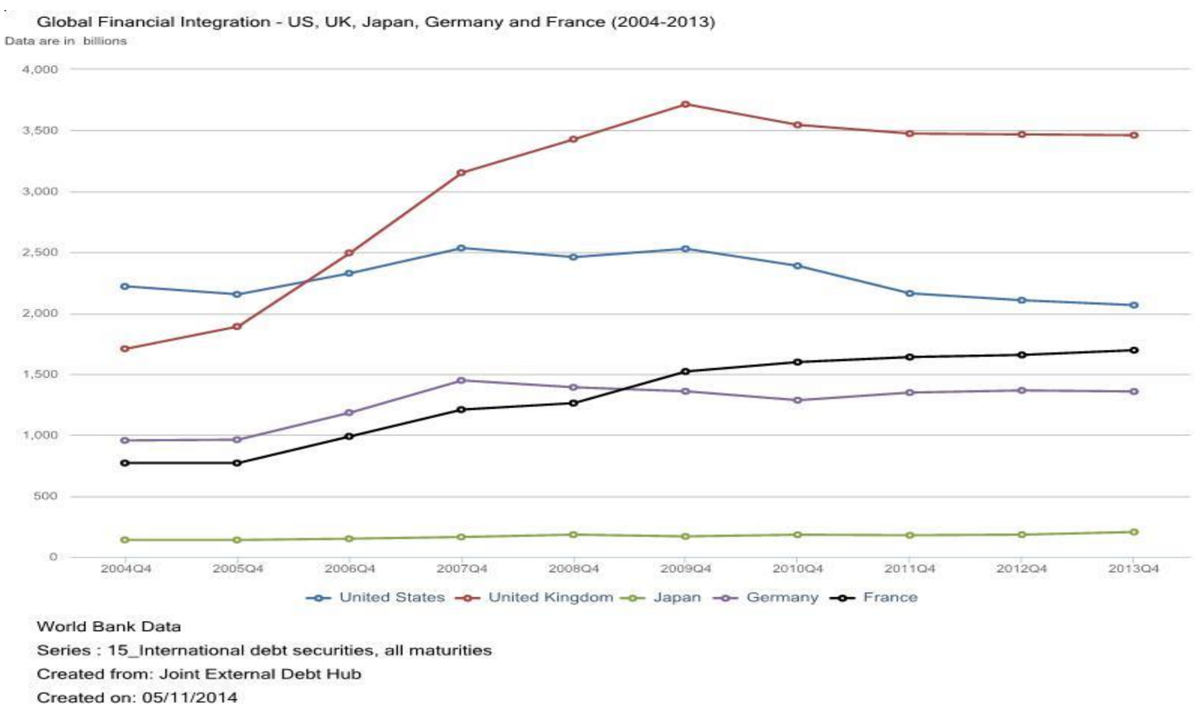
[84] The international securities statistics provide data on: net new issues, corresponding to the difference between completed issues and redemptions (redemptions include both scheduled repayments and early redemptions of outstanding paper); and issues outstanding at the end of each quarter, after allowing for redemptions.

[85] The data are derived from quarterly BIS statistics on issues of money market instruments, bonds and notes in international markets and are based on information provided by various market sources (such as Euroclear, Dealogic, Thomson Financial Securities Data and ISMA).

1995 to 2004



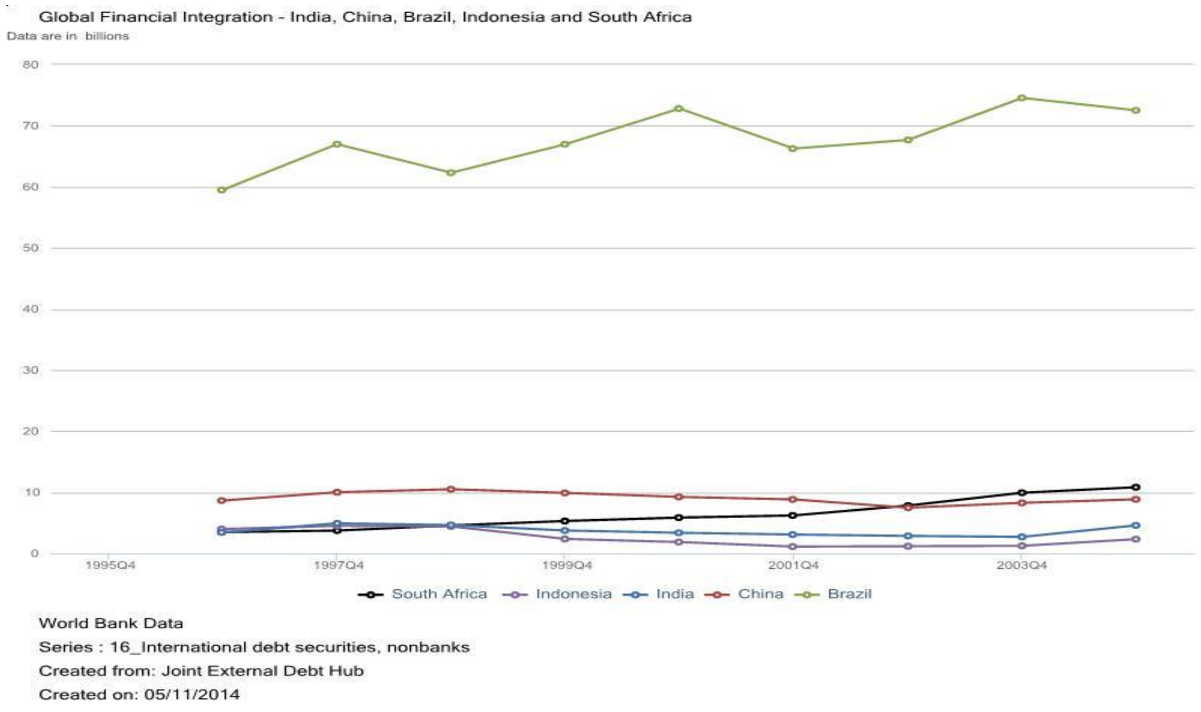
2004 to 2013



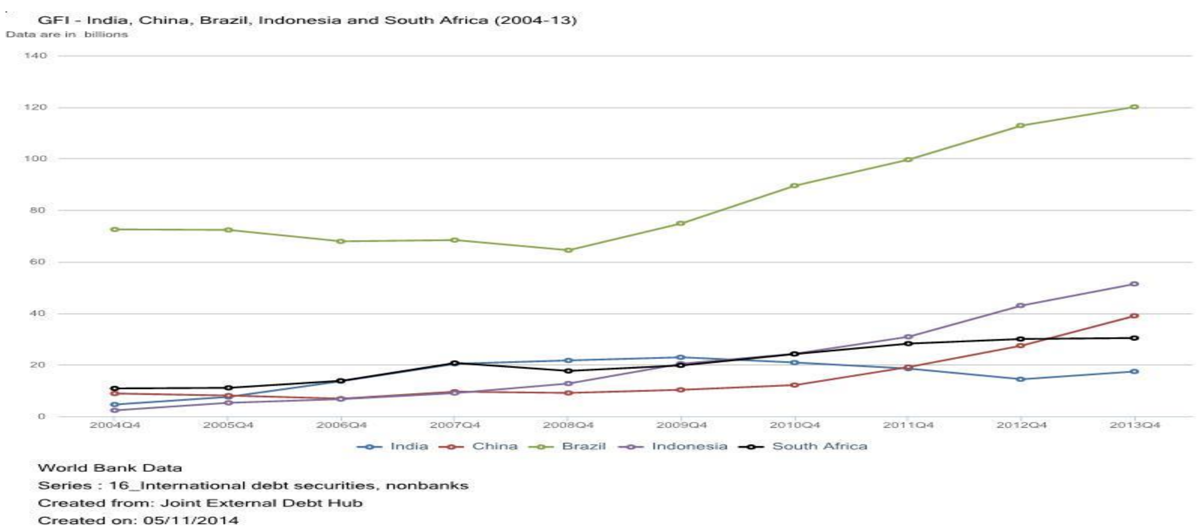
6.6. International Debt Securitas, nonbanks

Figure XV.F: International Debt Securitas, nonbanks

1995 to 2004



2004 to 2013



Nonbanks are defined as the sum of nonfinancial corporates, financial corporates, local governments, central banks and central governments. Otherwise, it is same like IDS AM.[86]

6.6.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

1995 to 2004:

IDS NB was volatile in the period of 1997 to 2001 in the sample emerging countries, and its degree was high in Brazil. Brazil's IDS NB was consistently volatile over the given period. The trend was similar to International debt securities.

2004 to 2013:

IDS NB reflected increasing trend in 2007, and then ***it turned volatile, resulting in a decreasing trend from 2008 till 2010.*** After 2010 till 2013, further increasing trend was visible in sample developing countries. Brazil's IDS NB increased swiftly compared to the sample emerging countries. The trend and pattern are same but not the absolute value of International debt securities.

6.6.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

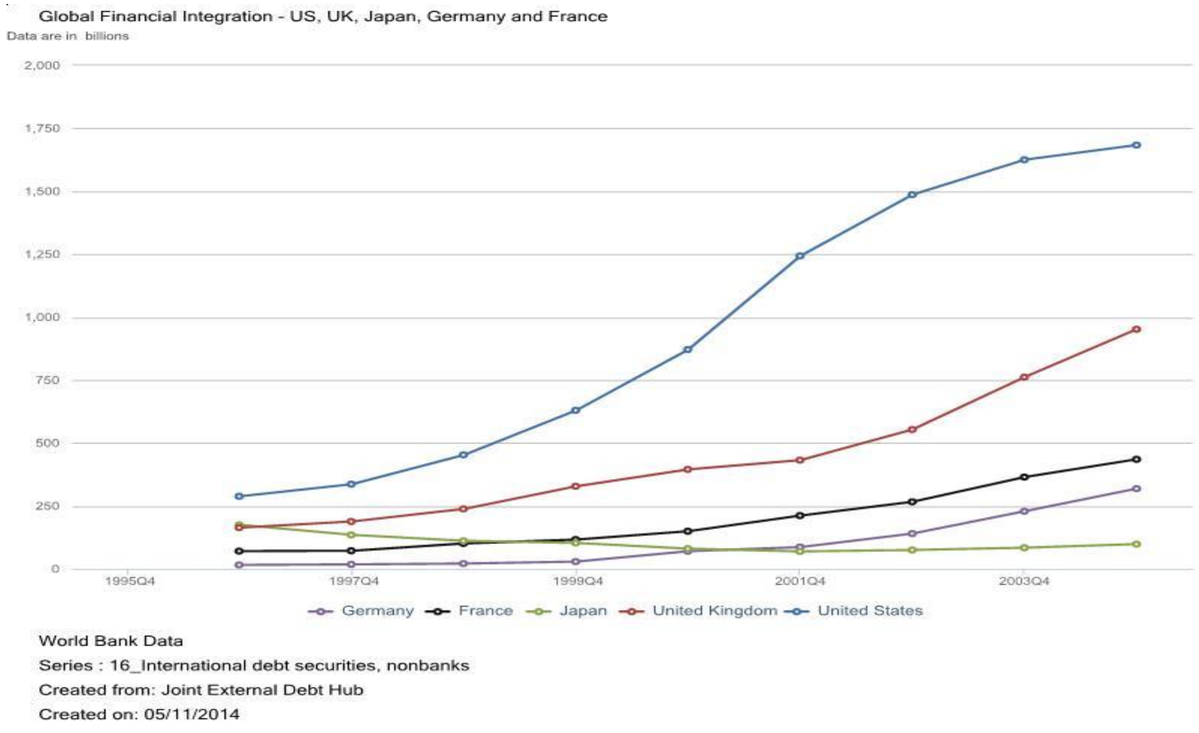
IDS-NB market increased in USA, UK, Germany and France, whereas continuous decreasing trends with a low rate in Japan is seen over the period of 1995-2003.

2004 to 2013:

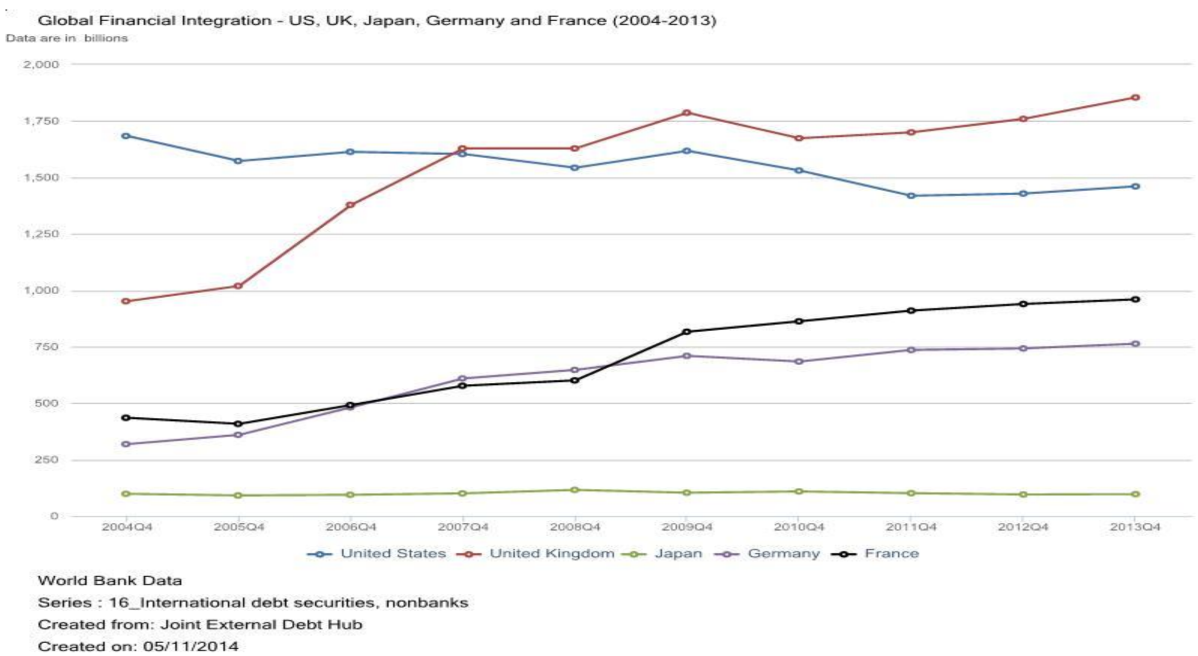
U.K's IDS-NB increased sharply from 2004-2009 period, US's IDS NB decreased and turned volatile from 2007 till 2013. In Germany and France, it reflected increasing trends, and Japan's IDS-NB was constant throughout the period.

[86] ibid.

1995 to 2004



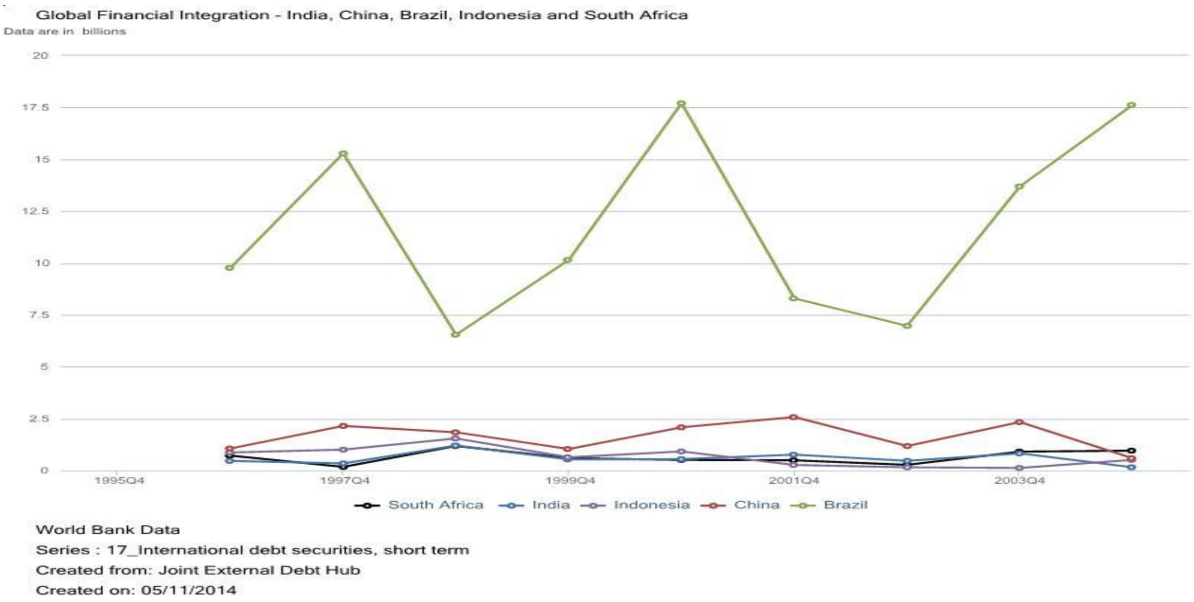
2004 to 2013



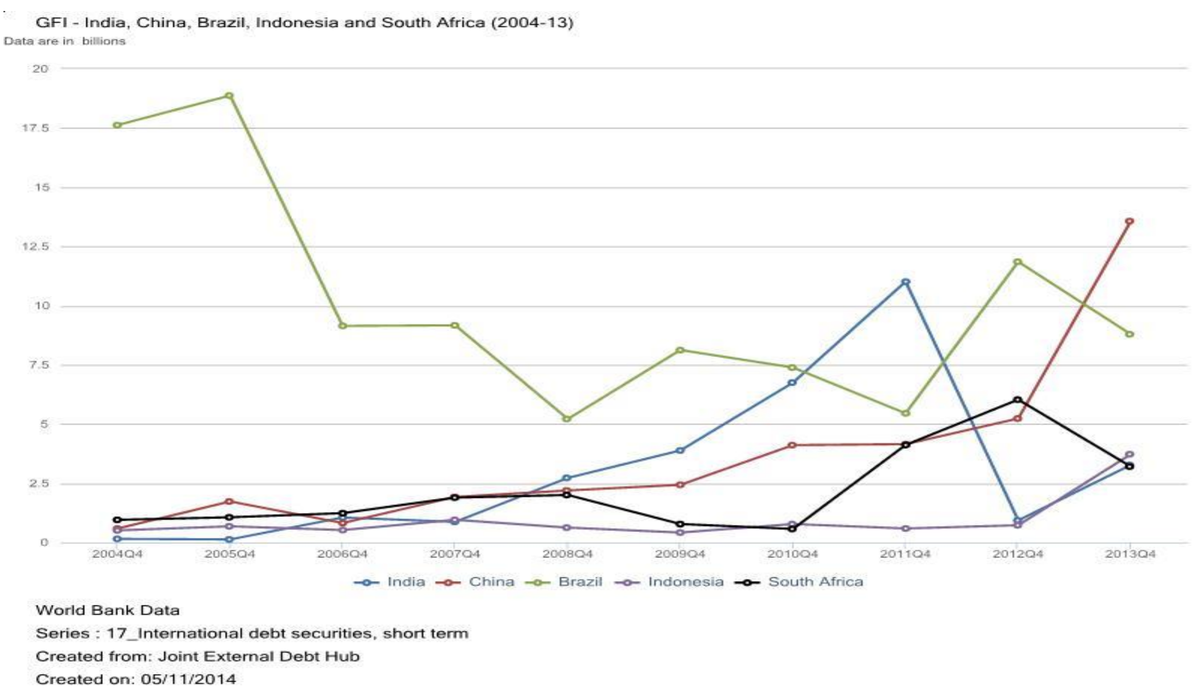
6.7. International Debt securities, short term:

6.7.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.G: International Debt securities, short term
1995 to 2004



2004 to 2013



Emerging Countries – India, China, Brazil, Indonesia, South Africa

1995 to 2004:

The short-term debt securities are volatile flows. From 1995-2004, the rate of volatility was in a narrow range for India, China, Indonesia and South Africa whereas volatility was significantly high in Brazil. These funds were extremely volatile throughout the period.

2004 to 2013:

IDS-ST reflected an increasing trend in India and China from 2004 to 2011. India's short-term fund became volatile from 2012 onwards, whereas, in China, it increased till the end of 2013. In the case of South Africa and Indonesia, the trend was volatile in a narrow range. However, Brazil's IDS-ST reflected high volatility and a decreasing trend.

6.7.2. Developed Countries – USA, UK, Japan, Germany, France

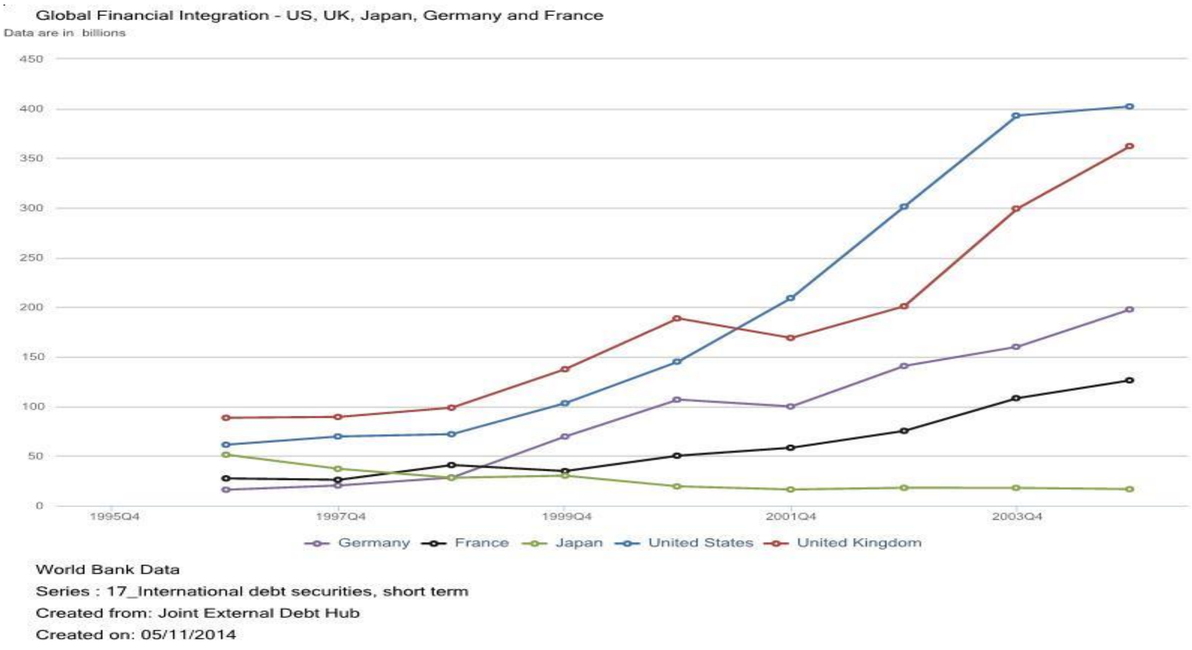
1995 to 2004:

IDS-ST reflected an increasing trend in the sample developed countries excluding Japan. IDS-ST was stable and less volatile in the sample developed countries, as compared to the sample emerging countries throughout the period.

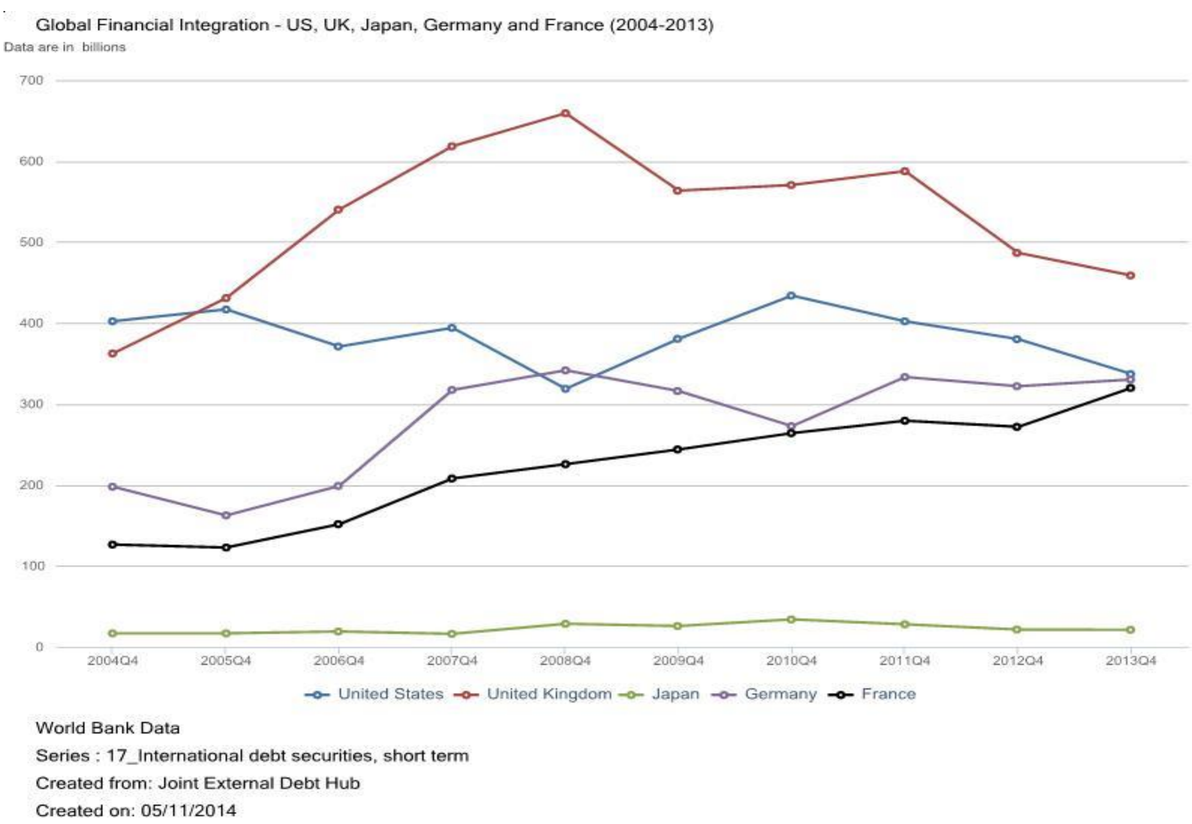
2004 to 2013:

IDS-ST flows were volatile in US, UK, Germany from the period of 2007-10, whereas it was constant in Japan and reflected an increasing trend in France in the same period.

1995 to 2004



2004 to 2013

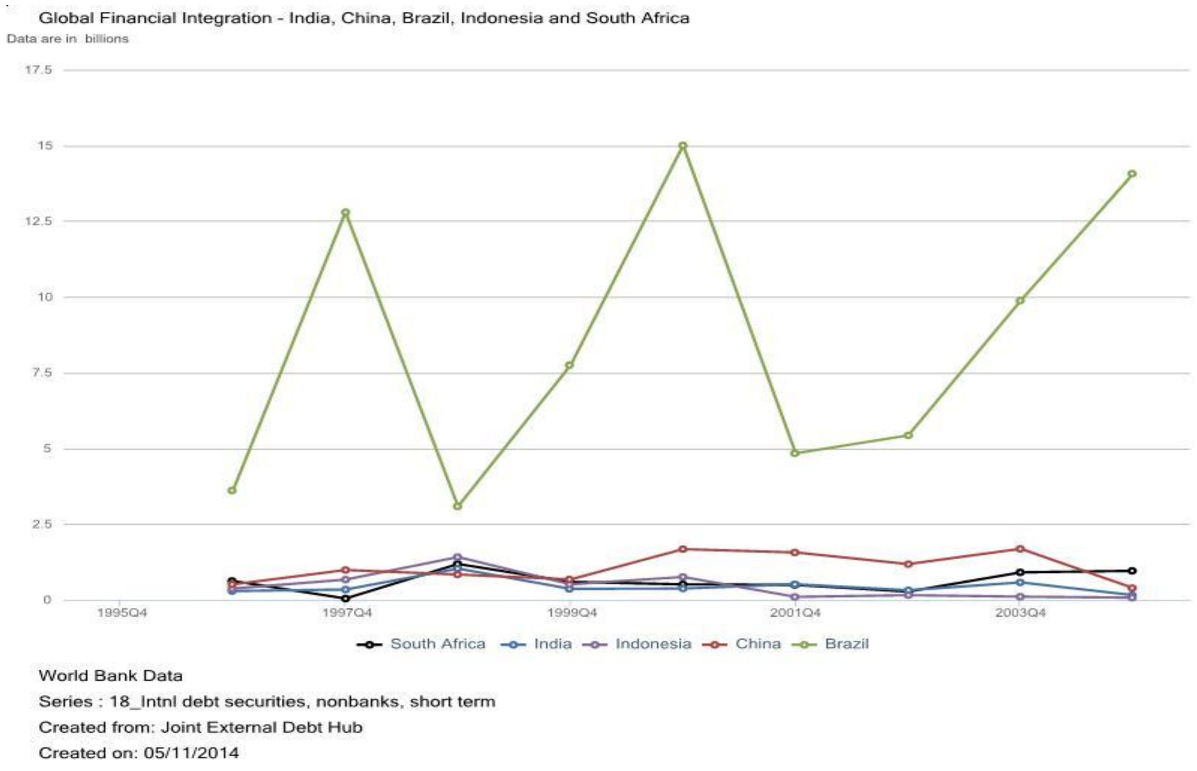


6.8. International Debt Securities, Nonbanks, short term:

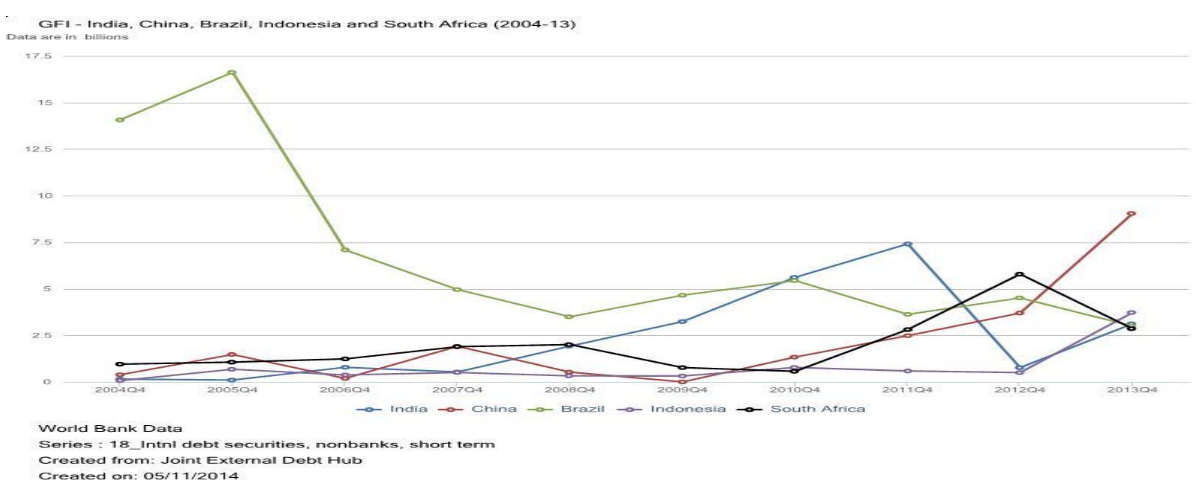
6.8.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.H: International Debt Securities, Nonbanks, short term

1995 to 2004



2004 to 2013



1995 to 2004:

The short-term debt securities are volatile flows. From 1995-2004, the volatility was in a narrow band in India, China, Indonesia and South Africa, whereas, IDS-NBST was highly volatile in Brazil.

2004 to 2013:

IDS-NBST reflected an increasing trend in India from 2004 to 2011. India's short-term fund became volatile from 2012 onwards whereas China's flow increased till the end of the year 2009 and onwards. In the case of South Africa and Indonesia, it was volatile in a narrow band, however, in Brazil, the volatility was high with decreasing trends from 2005 onwards.

6.8.2. Developed Countries – USA, UK, Japan, Germany, France

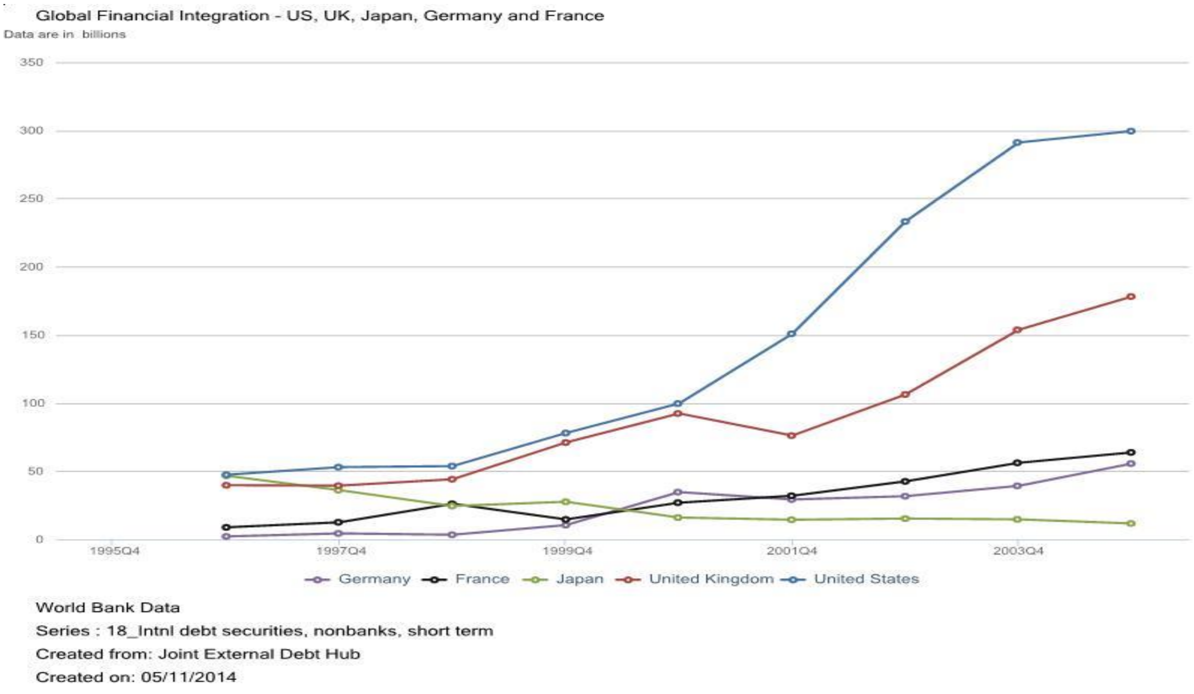
1995 to 2004:

IDS-NBST showed an increasing trend in sample developed countries excluding Japan. IDS-NBST were stable and less volatile in the sample developed countries as compared to sampled emerging countries throughout the period.

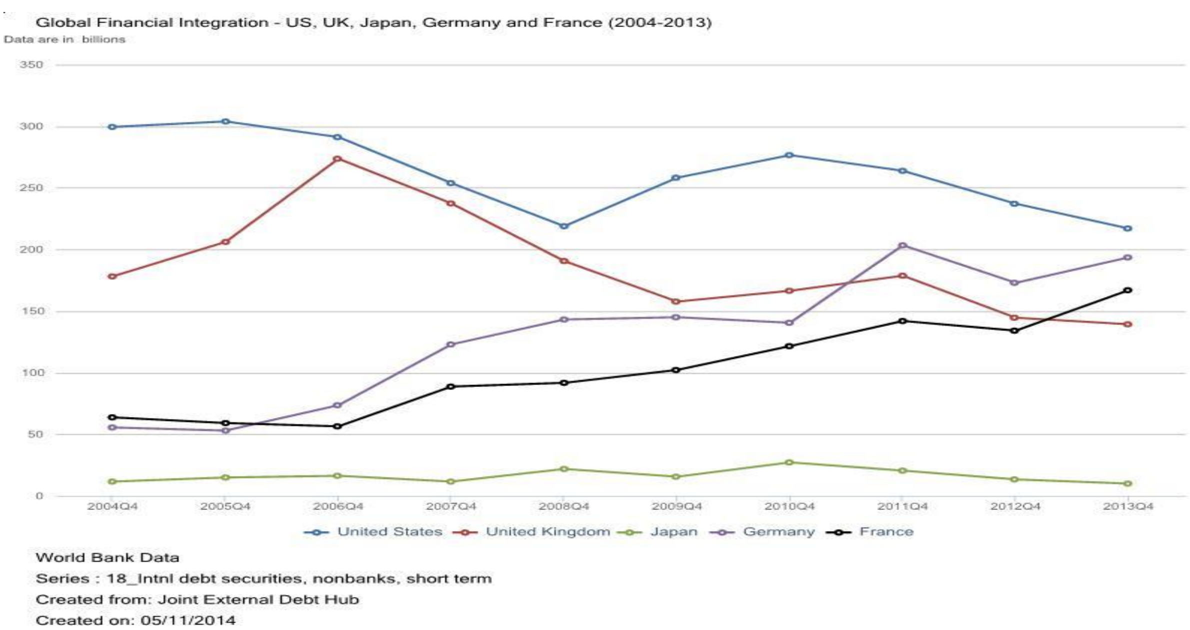
2004 to 2013:

IDS-NBST flows were volatile in US and UK from the period of 2007-10, whereas it reflected a decreasing pattern with a low rate in Japan and increasing trend in Germany and France in the same period.

1995 to 2004



2004 to 2013

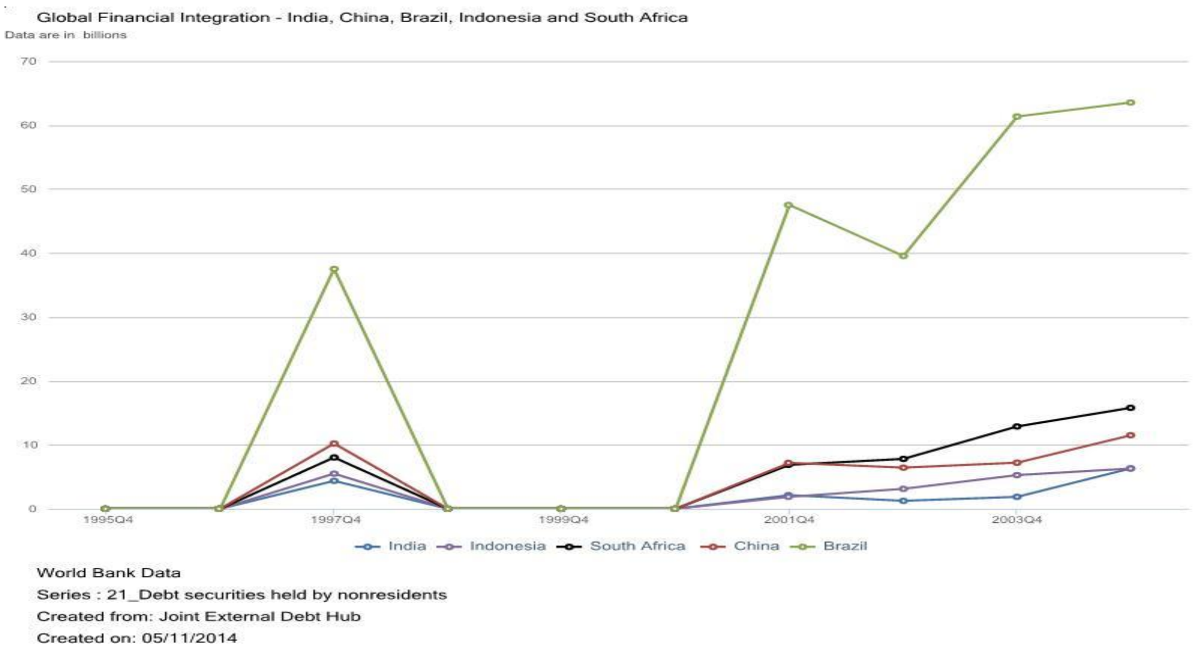


6.9. Debt Securities held by non-residents:

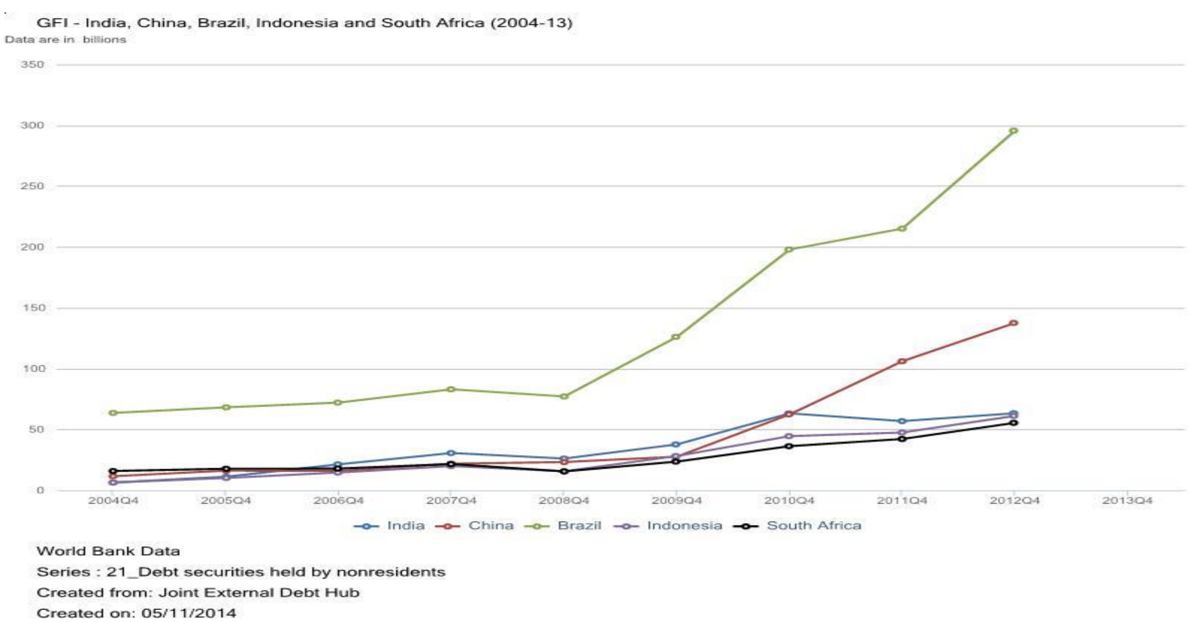
6.9.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.I: Debt Securities held by non-residents

1995 to 2004



2004 to 2013



The data are sourced from IMF's Coordinated Portfolio Investment Survey (CPIS) database. Individual economy data on debt securities held by non-residents are derived from other economies' CPIS creditor data. The relevant tables in the CPIS database are: (1) derived portfolio investment liabilities: long-term debt securities;[87] and (2) derived portfolio investment liabilities: short-term debt securities.[88] The residence of holders and issuers of securities is determined by their center of economic interest. For enterprises, this is usually characterized by the physical presence, and in some cases by legal domicile. All banks (whether branches or incorporated), insurance companies (whether branches or incorporated), and mutual funds are treated as resident in the jurisdiction where they are legally domiciled.[89]

1995 to 2004:

Volatile trends were observed in sample emerging countries from 1996 to 1998. After 2000, DS-NR increased gradually in India, Indonesia, South Africa and China, but in Brazil, it increased at a significant rate.

2004 to 2013:

DS-NR was volatile from 2006 to 2008, otherwise, DS-NR reflected an increasing trend throughout the period in sample emerging countries, but from 2008 onwards, it increased at a higher rate in Brazil and China.

6.9.2. Developed Countries – USA, UK, Japan, Germany, France

[87] Long-term debt securities cover instruments such as bonds, debentures, and notes that usually give the holder the unconditional right to a fixed cash flow or contractually determined variable money income and have an original term to maturity of more than one year.
[88] Short-term debt securities cover such instruments as treasury bills, commercial paper, and bankers' acceptances that usually give the holder the unconditional right to a stated fixed sum of money on a specified date. These instruments are usually traded on organized markets at a discount and have an original term to maturity of one year or less.
[89] Joint BIS-IMF-OECD-WB External Debt Hub (JEDH), 'Creditor/Market Tables Metadata' (28 September 2015) <http://www.jedh.org/jedh_metadata-line%20items.html> accessed 07-Mar-16.

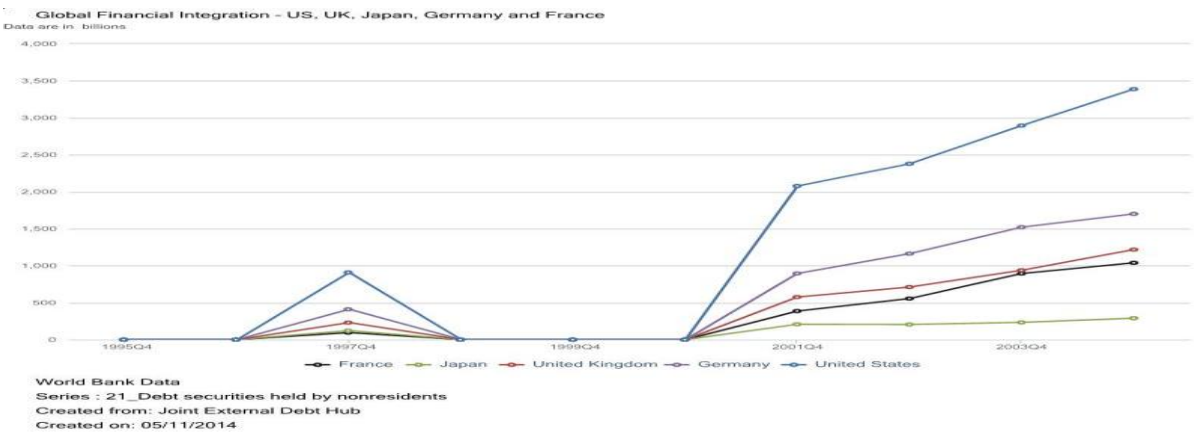
1995 to 2004:

DS-NR was volatile from 1996 to 1998 in the sample developed countries. After 2000 onwards, it has increased gradually in Germany, France, UK, and Japan but in the US, it increased at a significant rate.

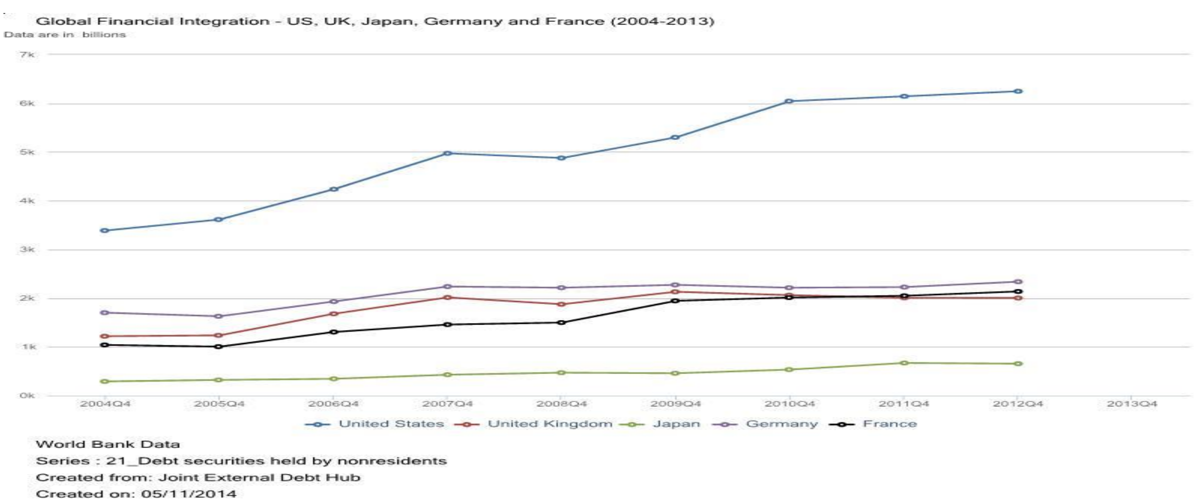
2004 to 2013:

DS-NR gradually increased in sample developed countries. DS-NR was volatile from 2007 to 2009. Otherwise, it reflected an increasing trend throughout the period in the UK, US and France. From 2008 onwards, it increased at a higher rate in the US. In Japan, it was constant throughout and from 2008 onwards, DS-NR was constant in Germany.

1995 to 2004



2004 to 2013

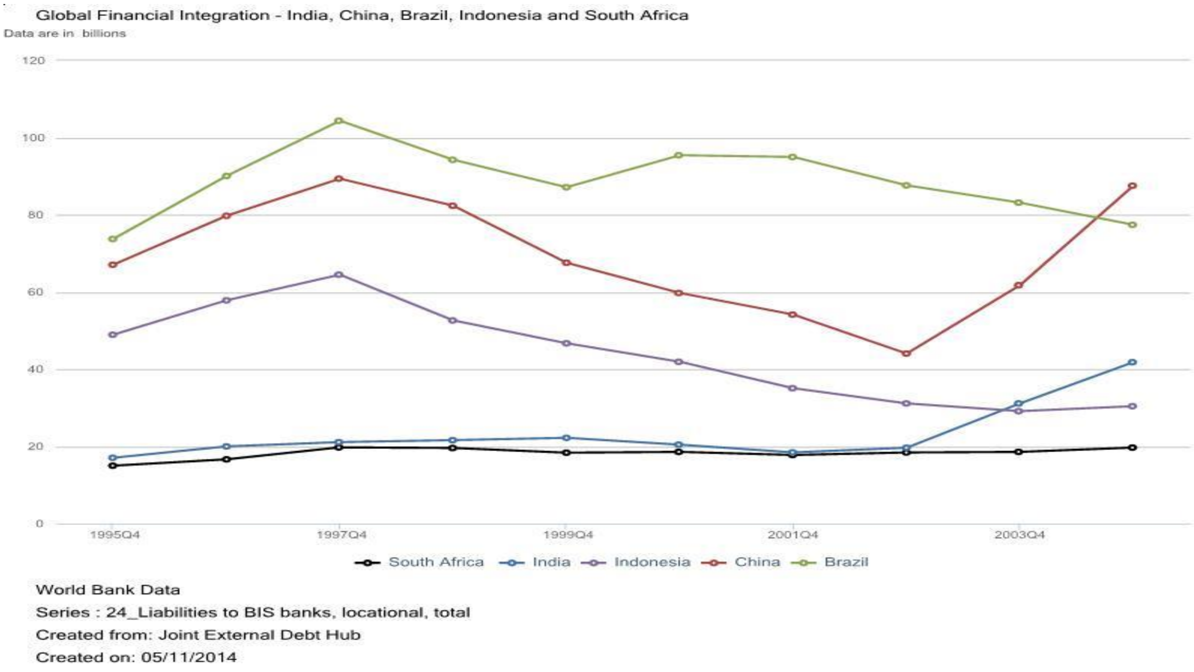


6.10. Liabilities to BIS banks, locational, total:

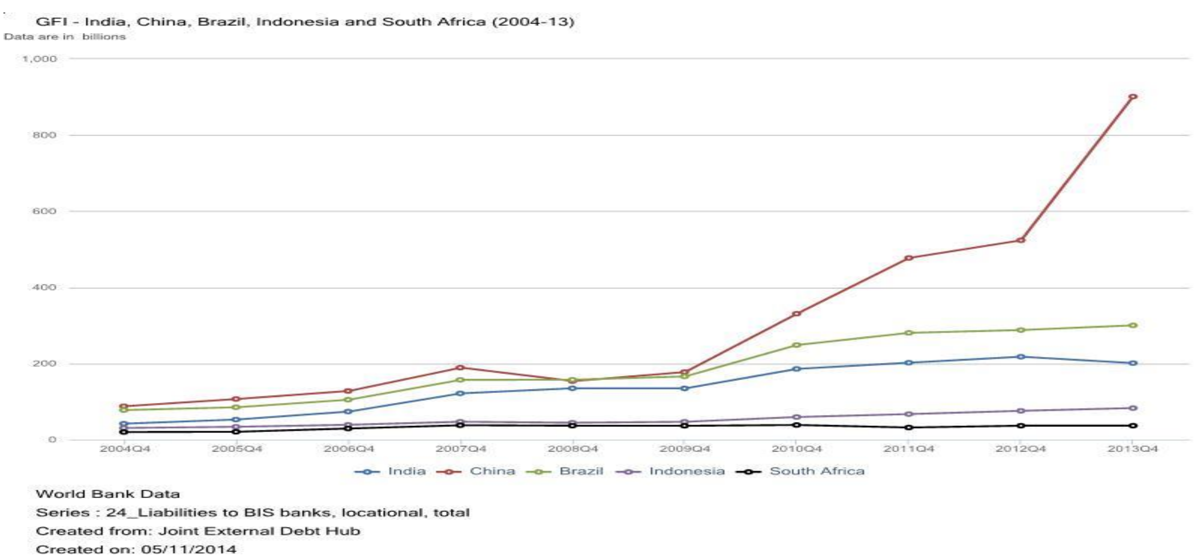
6.10.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.J: Liabilities to BIS banks, locational, total

1995 to 2004



2004 to 2013



This parameter provides total cross-border liabilities (all instruments) to banks that report to the BIS Locational Banking Statistics.[90]

1995 to 2004:

Liabilities to BIS banks (locational, total) has increased at a higher rate in Brazil, China, and Indonesia in from 1995 to 1997 as compared to India and South Africa. Subsequently, ***it showed a decreasing pattern from 1998 till the end of 2002 in the sample emerging countries.*** In Brazil and Indonesia, it declined till 2004. India's BIS bank liabilities were volatile in a narrow range till 2002 and then it started to increase from 2003 onwards.

2004 to 2013:

Liabilities to BIS banks (locational, total) was volatile from the period of 2007 to 2008 in the sample emerging countries. Otherwise, it reflected increasing trends throughout the mentioned period, but in China, it increased at a higher rate after 2009 onwards.

6.10.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

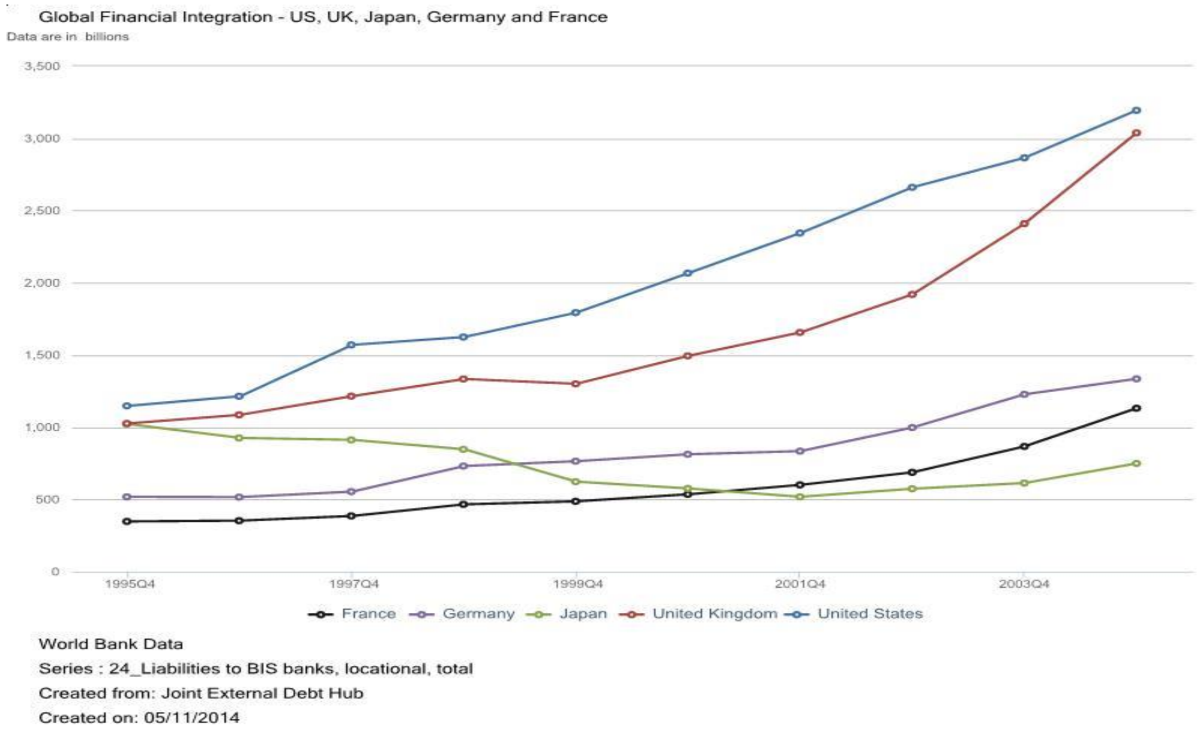
Liabilities to BIS banks (locational, total) was volatile in the period from 1997 to 1999. Otherwise, it reflected an increasing trend in France, Germany, UK, US throughout the mentioned period, but it showed a decreasing trend in Japan.

2004 to 2013:

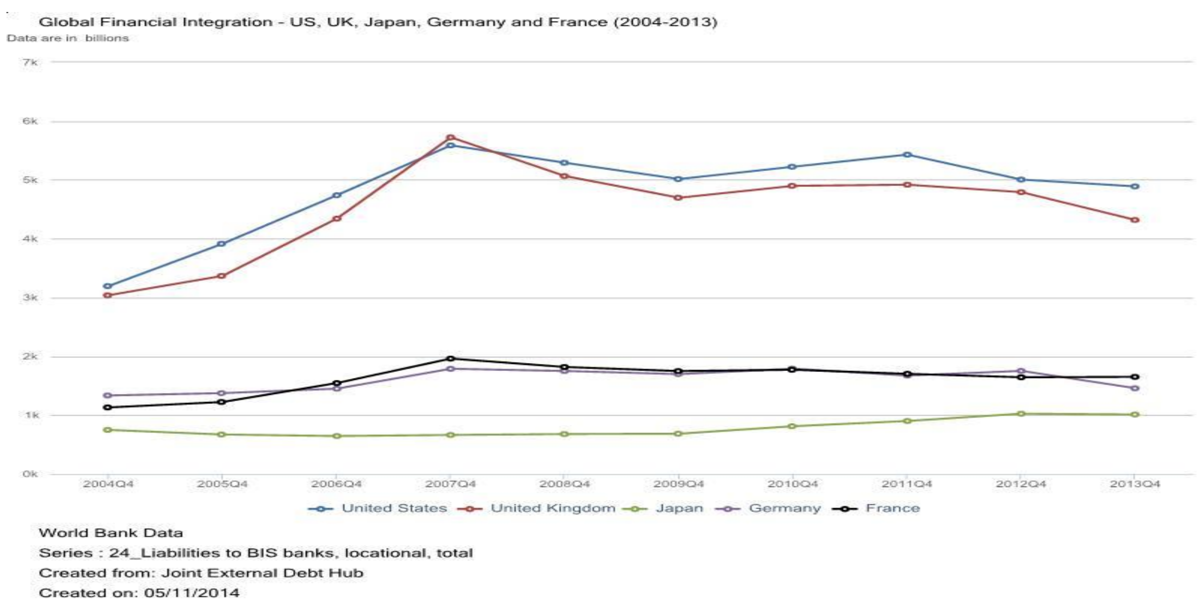
Liabilities to BIS banks (locational, total) reflected an increase in US, UK, France and Germany till 2007 but then it declined till 2009, and after 2009, it changed by a very nominal rate, whereas in Japan it was constant throughout the period. ***In short, Liabilities to BIS banks (locational, total) was volatile in the period 2006 to 2009.***

[90] Joint BIS-IMF-OECD-WB External Debt Hub (JEDH), 'Creditor/Market Tables Metadata' (28 September 2015) <http://www.jedh.org/jedh_metadata-line%20items.html> accessed 07-Mar-16.

1995 to 2004



2004 to 2013

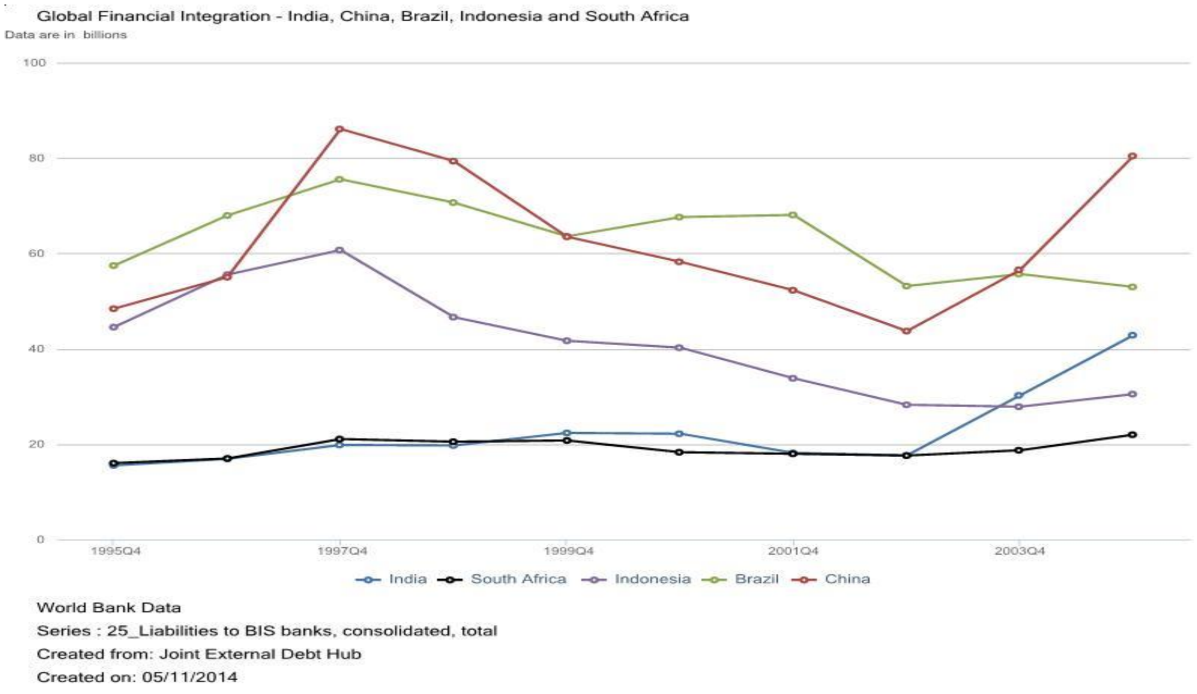


6.11. Liabilities to BIS banks, Consolidated, total:

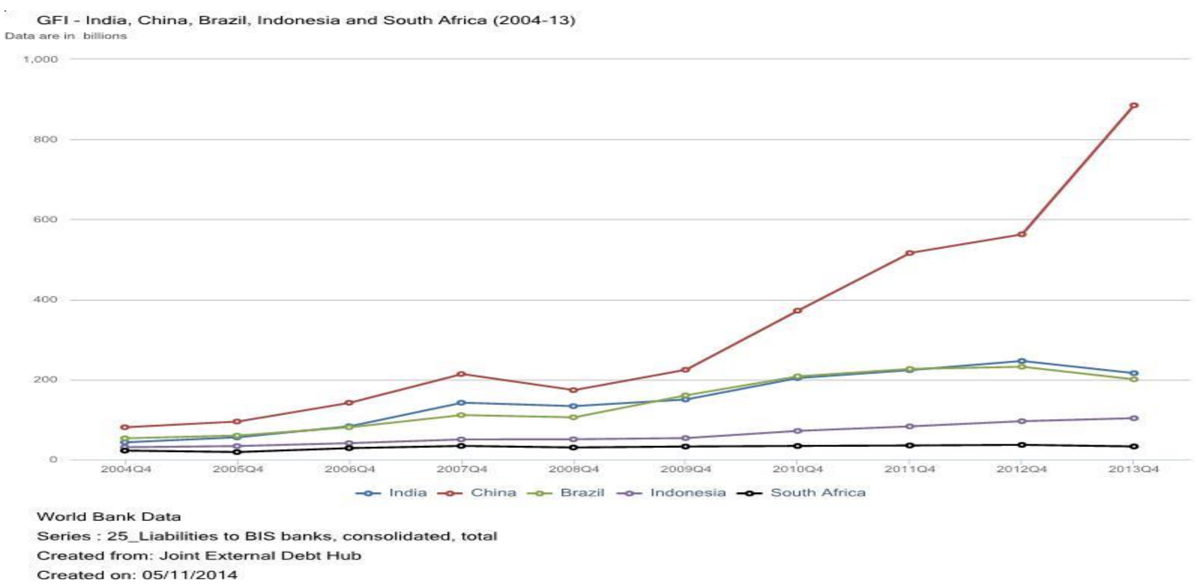
6.11.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.K: Liabilities to BIS banks, Consolidated, total

1995 to 2004



2004 to 2013



This parameters provides total international liabilities (all instruments) of banks that report the BIS Consolidated Banking Statistics.[91]

1995 to 2004:

Liabilities to BIS banks (Consolidated, total) increased at a higher rate in Brazil, China, and Indonesia as compared to India and South Africa from 1995 to 1997. ***It started to decline in 1998 and continued till the end of 2002. In Brazil and Indonesia, it declined till 2004.*** India's BIS bank liabilities increased at a high rate from 2004 onwards.

2004 to 2013:

Liabilities to BIS banks (Consolidated, total) was volatile from 2006 to 2009. It revealed an increasing trend throughout the period, but in China, it increased at a higher rate after 2009.

6.11.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

Liabilities to BIS banks (Consolidated, total) revealed increasing trend in France, Germany, UK, and the USA from 1998 onwards whereas in the case of Japan, the trend was a combination of increasing and decreasing pattern within a very narrow band.

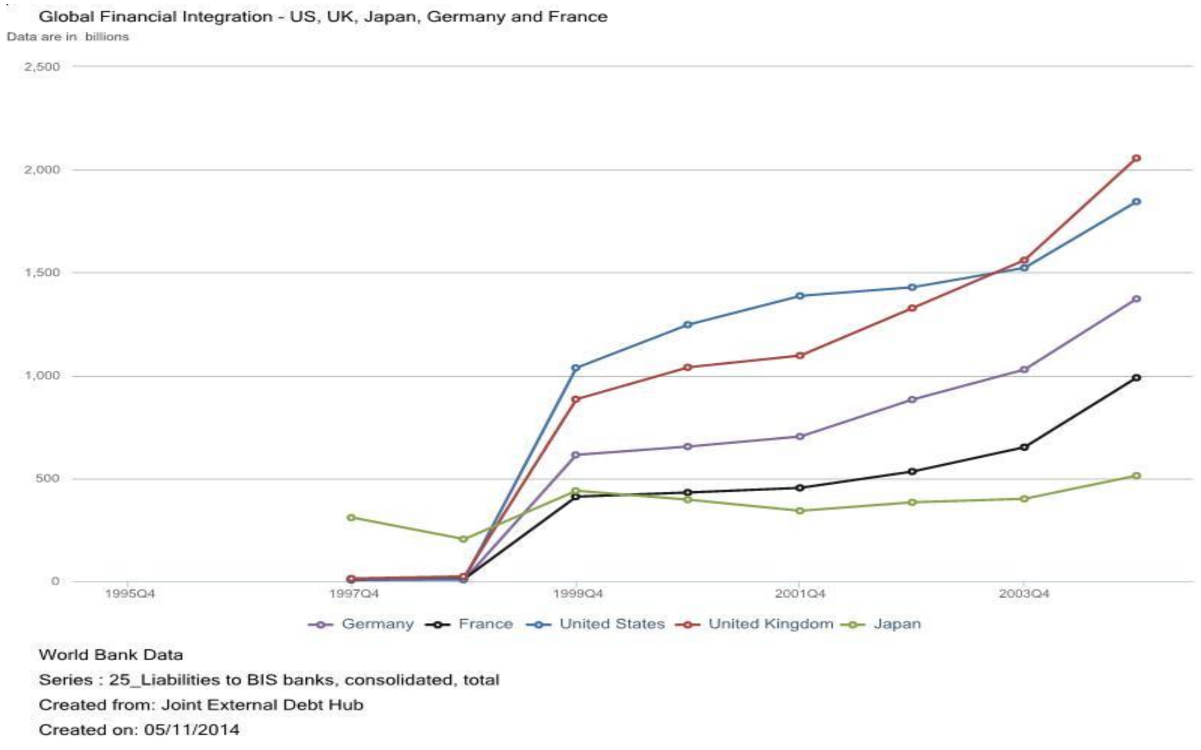
2004 to 2013:

Liabilities to BIS banks (Consolidated, total) has increased in US, UK, France and Germany till 2007. ***In the backdrop of GFI, Liabilities to BIS banks (Consolidated, total) showed decline from 2007 to 2012 in the sample countries excluding Japan***. In Japan, there was a marginal two way change during the period.

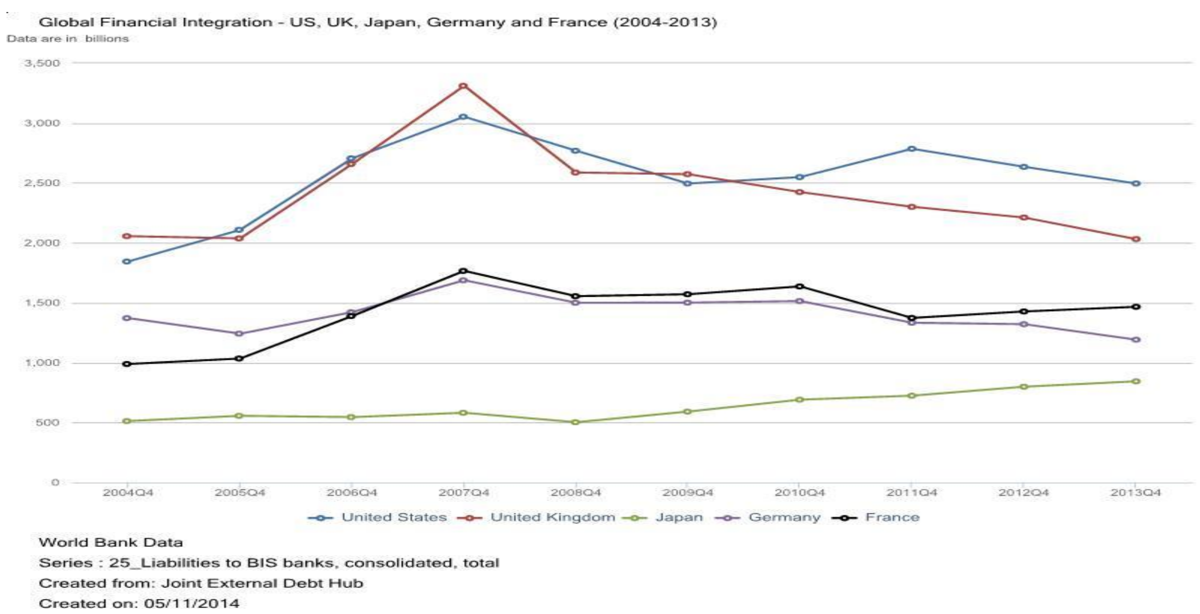
---

[91] Joint BIS-IMF-OECD-WB External Debt Hub (JEDH), 'Creditor/Market Tables Metadata' (28 September 2015) <http://www.jedh.org/jedh_metadata-line%20items.html> accessed 07-Mar-16.

1995 to 2004



2004 to 2013

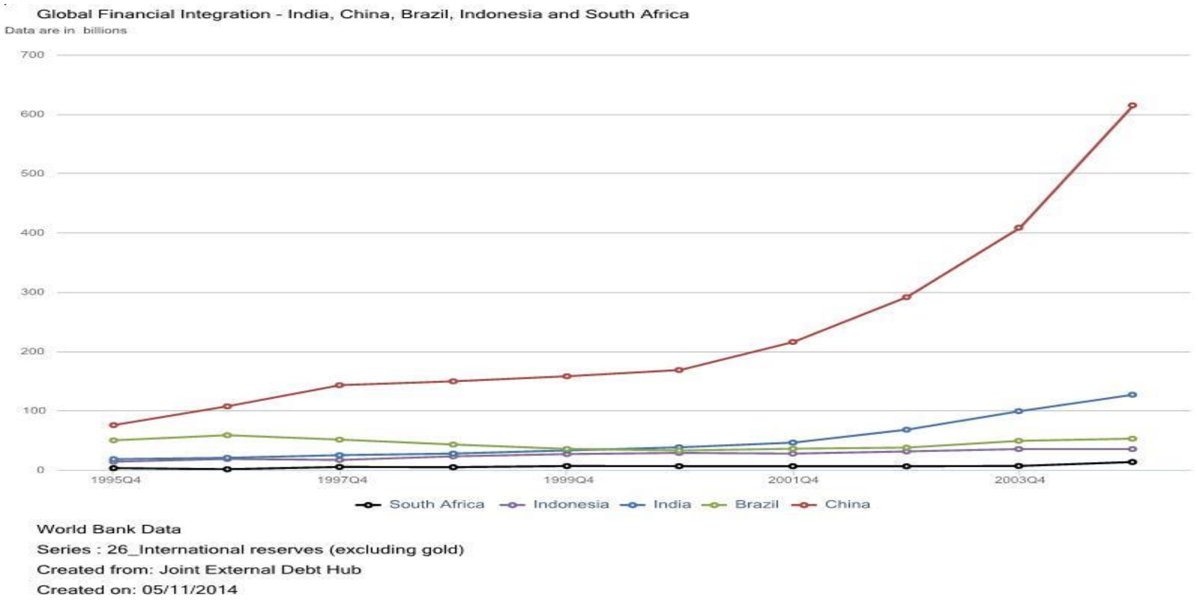


6.12. International Reserve (Excluding Gold):

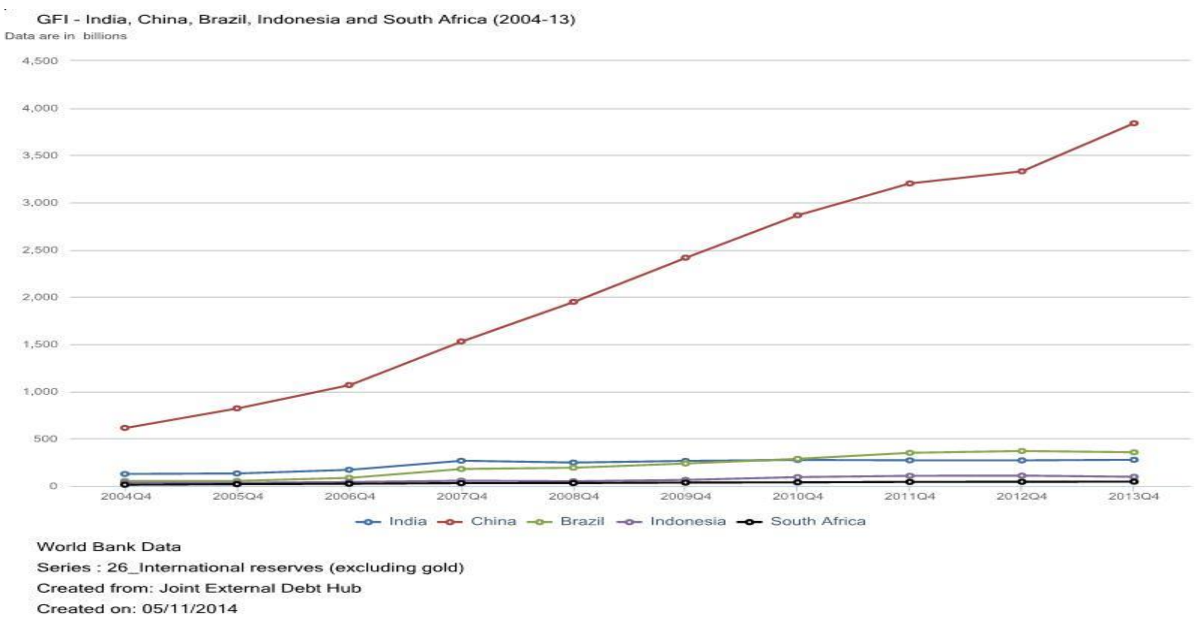
6.12.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.L: International Reserve (Excluding Gold)

1995 to 2004



2004 to 2013



International reserve assets[92] consist of those external assets that are readily available to and controlled by monetary authorities[93] for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing). Internatioanl Reserve (excluding gold) equal Total Reserves minus Gold, which includes the US dollar value of monetary authorities' holdings of SDRs, reserve position in the Fund, and foreign exchange.[94]

1995 to 2004:

Brazil international reserve decreased from the period of 1997 to 2000 whereas Indonesia IR reflected a low and constant trend. India's international reserve increased gradually over the period. However, China's international reserve increased at a significantly high rate and it was higher among all sample emerging countries. As per SDRs data analysis, India's SDR was higher than China in this time interval but in case of International reserve as a whole, China has surpassed the emerging sample countries.

2004 to 2013:

International Reserve (Excluding Gold) has gradually increased in all sample countries, but the rate of increase was very in high in China. ***From the period of 2008 to 2010, International Reserve (Excluding Gold) was volatile in India, Brazil and Indonesia, and China was least affected in the same period.*** South Africa's IR was low reflected a constant pattern throughout the time interval.

6.12.2. Developed Countries – USA, UK, Japan, Germany, France

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[92] The data on international reserve assets refer to entries published in the world tables of the IMF's International Financial Statistics (IFS). International reserve assets defined in *BPM6*.

[93] Monetary authorities encompass the central bank (which subsumes other institutional units included in the central bank subsector, such as the currency board) and certain operations usually attributed to the central bank but sometimes carried out by other government institutions or commercial banks, such as government-owned commercial banks. Such operations include the issuance of currency; maintenance and management of reserve assets, including those resulting from transactions with the IMF; and operation of exchange stabilization funds.

[94] Joint BIS-IMF-OECD-WB External Debt Hub (JEDH), 'Creditor/Market Tables Metadata' (28 September 2015) <http://www.jedh.org/jedh_metadata-line%20items.html> accessed 07-Mar-16.

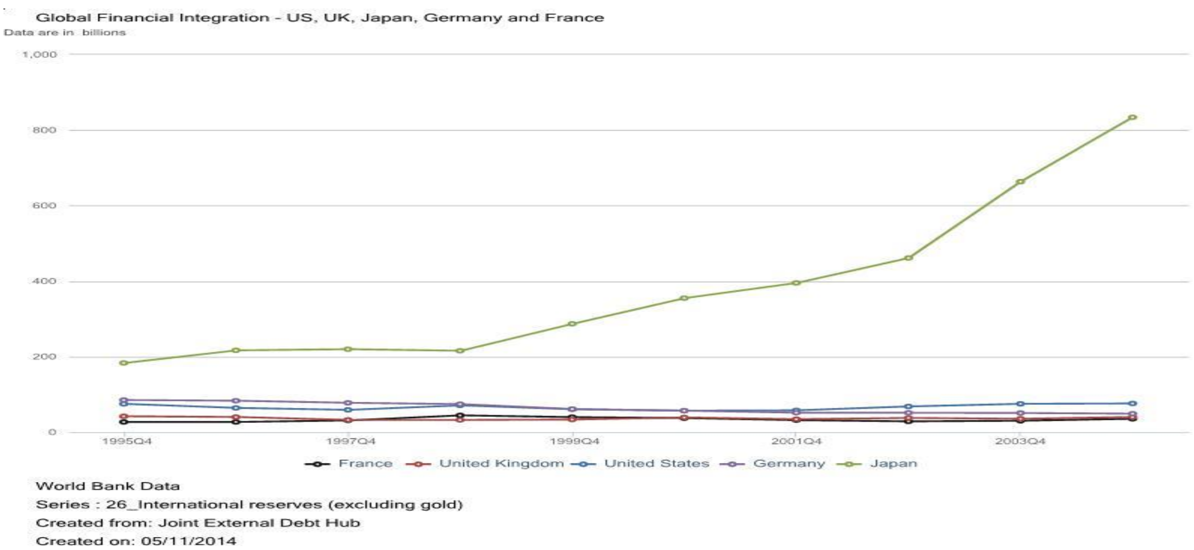
1995 to 2004:

International Reserve (Excluding Gold) was volatile in UK, US, Germany and France from the period of 1998 to 2000. In the case of Japan, it increased at a high rate all time in the mentioned period.

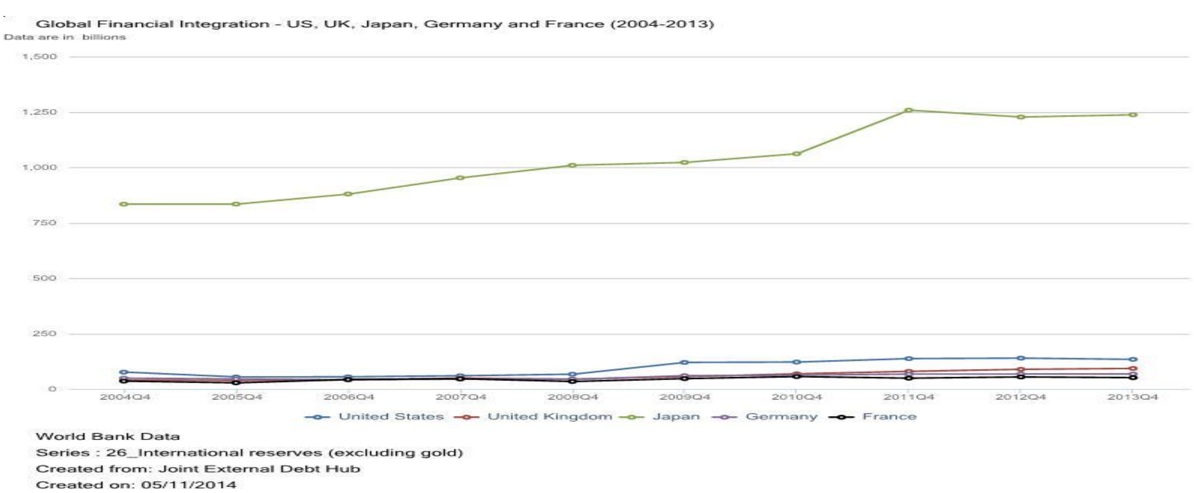
2004 to 2013:

International Reserve (Excluding Gold) *was unstable in the period of 2005 to 2008* in US, UK, Germany and France. However, in the case of Japan, it reflected an increasing trend.

1995 to 2004



2004 to 2013

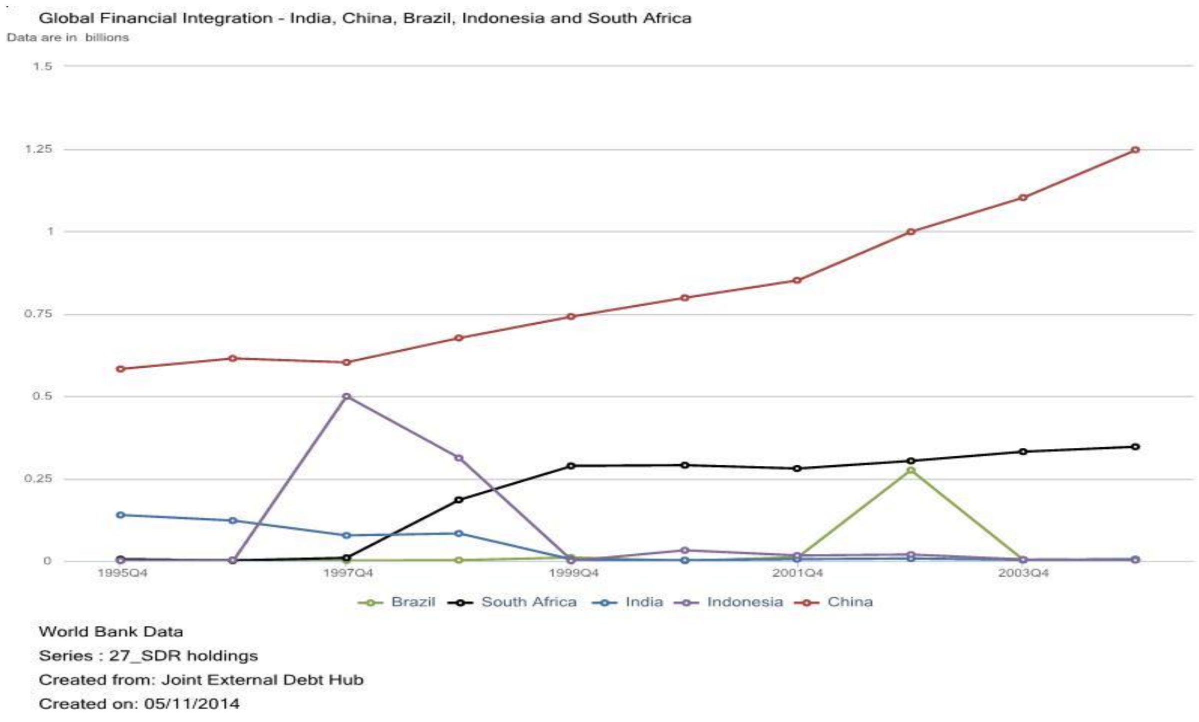


6.13. SDR holdings:

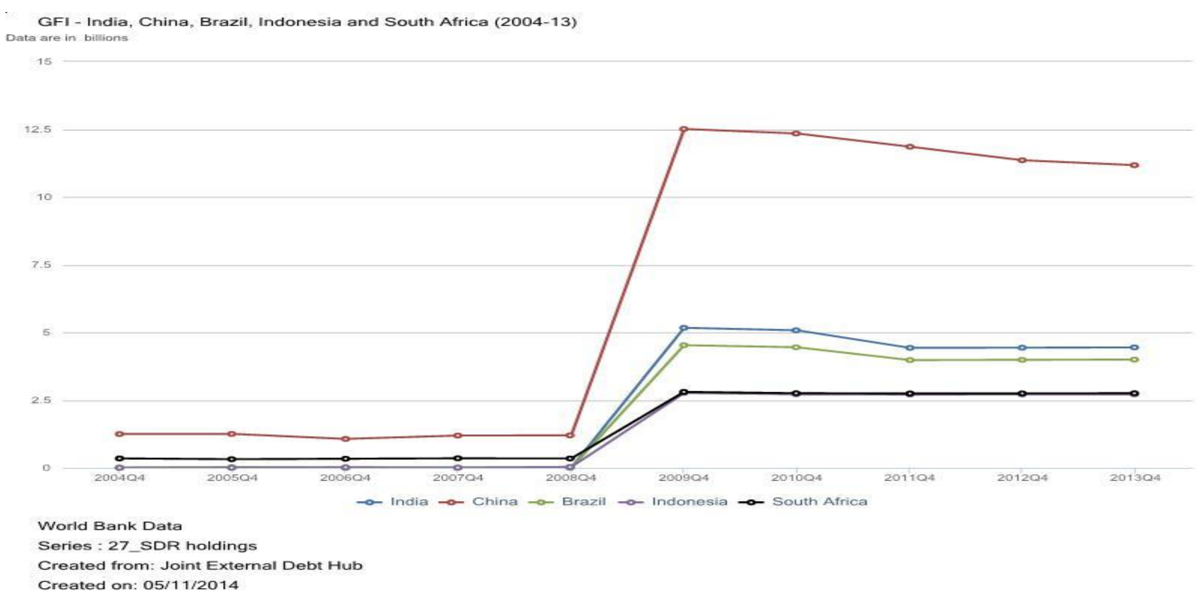
6.13.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.M: SDR holdings

1995 to 2004



2004 to 2013



SDR[95] holdings are international reserve assets created by the IMF to supplement existing reserves.

1995 to 2004:

In Indonesia and Brazil, SDR holdings was volatile in nature. China's and South Africa's SDR holding increased steadily, whereas India's SDR holding reduced gradually during the period.

2004 to 2013:

SDR holdings was constant from 2004 to 2008 in all sample countries, but it has increased at a high rate from 2009 onwards due to the new allocation of SDR fund. China's SDR increased at a higher rate in comparison to other sample emerging countries.

6.13.2. Developed Countries – USA, UK, Japan, Germany, France

1995 to 2004:

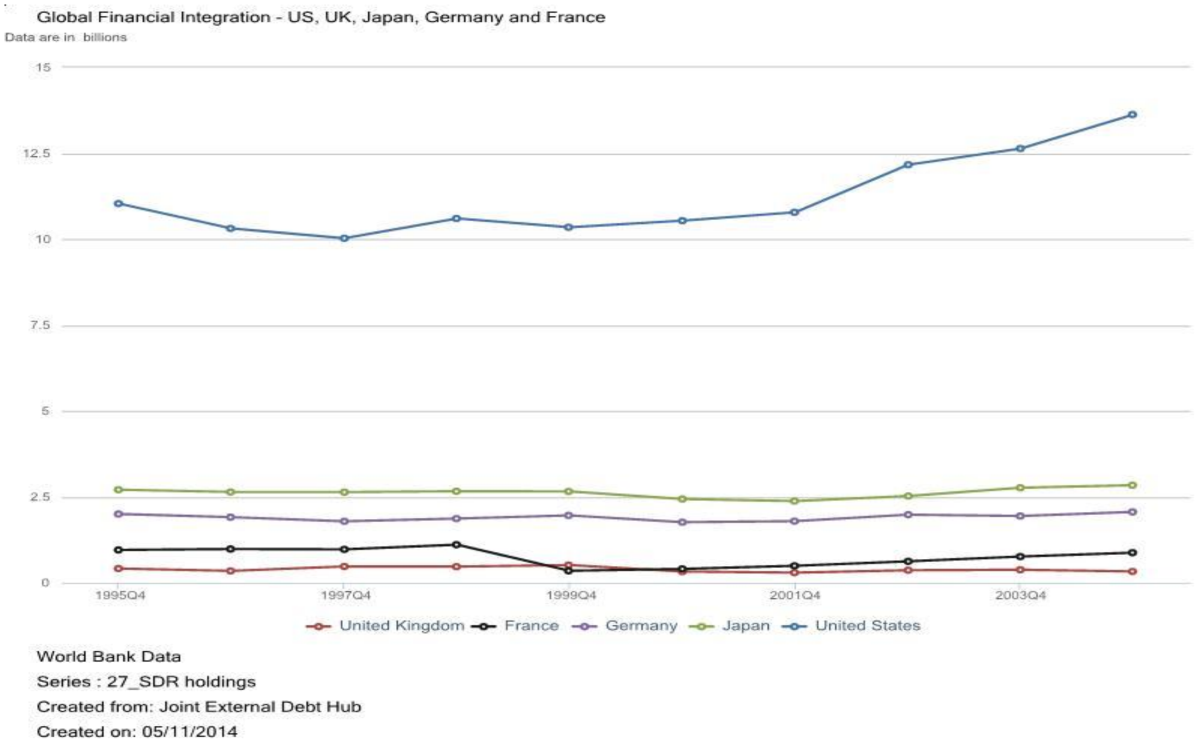
Apart from small fluctuation, SDR holdings was constant and stable, in the period of 1998 to 2001

2004 to 2013:

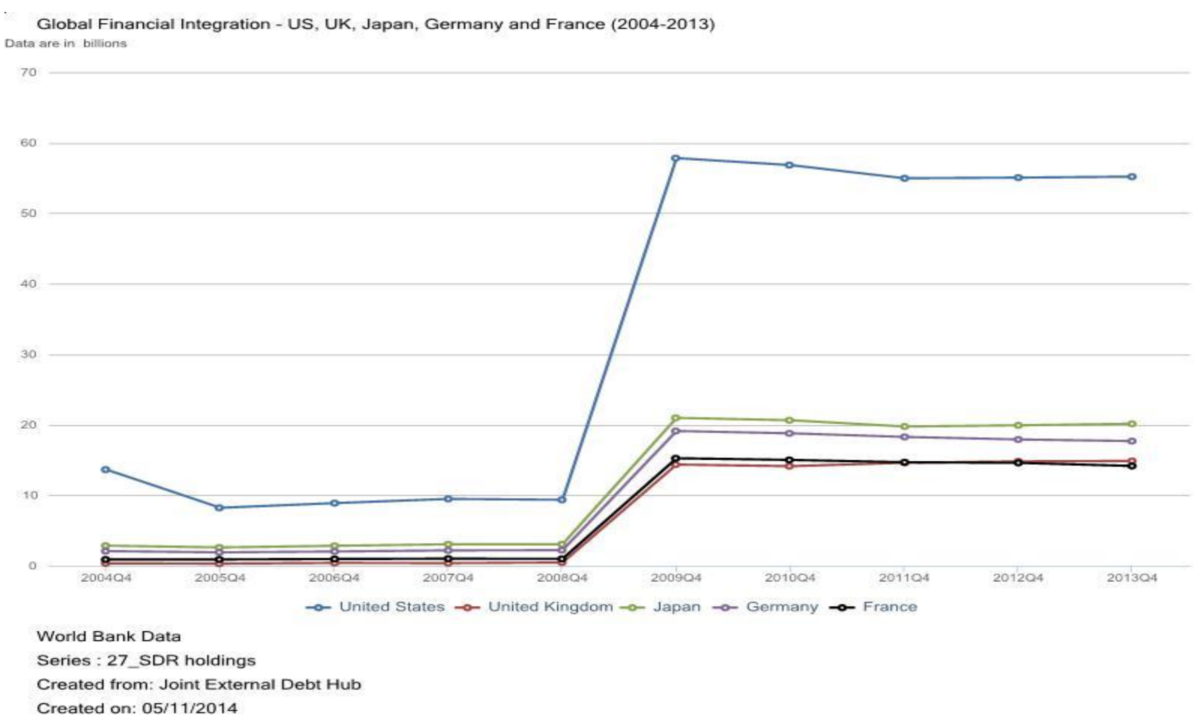
SDR holdings was constant till 2008. ***After 2009, it has increased at a high rate due to the new allocation of SDR fund in the backdrop of GFC*** in all sample developed countries, but the rate of increase in SDRs was significant in the USA as compared to other sample countries.

[95] SDR are valued on the basis of a basket of currencies of four key international currencies and can be used in a wide variety of transactions and operations among official holders. SDRs are allocated to Fund members that are participants in the Fund's Operations Division for SDRs and Administered Accounts in proportion to their quotas. The Executive Board decided that, effective October 1, 2016, the Chinese renminbi is determined to be freely usable and will be included as a fifth currency, along with the U.S. dollar, euro, Japanese yen, and pound sterling, in the SDR basket.

1995 to 2004



2004 to 2013

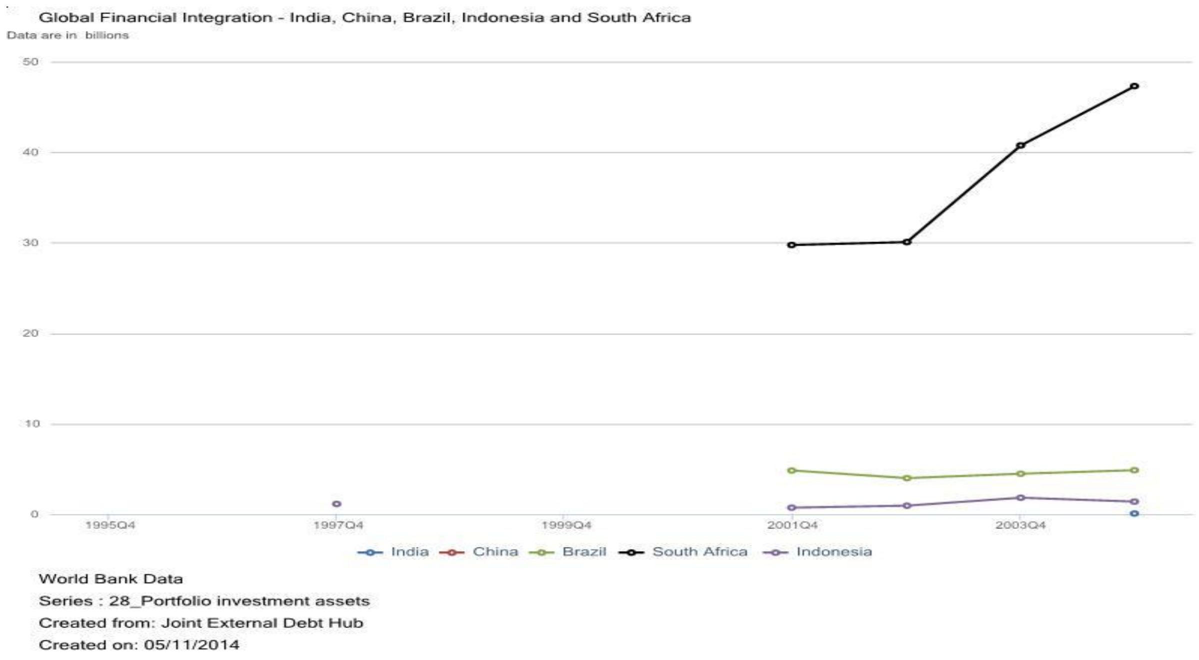


6.14. Portfolio Investment Assets:

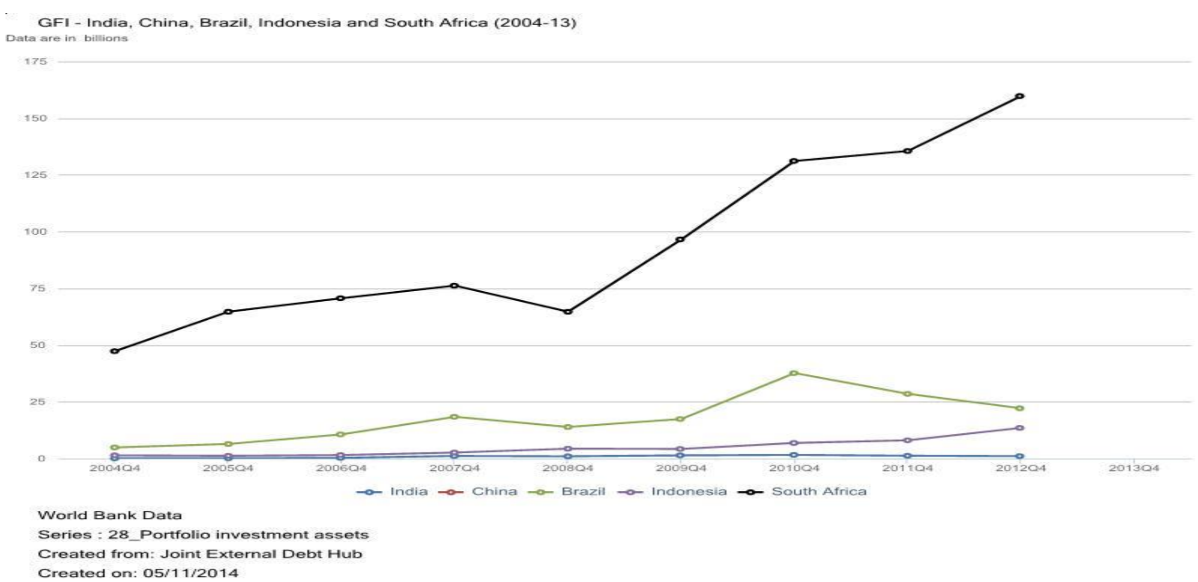
6.14.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.N: Portfolio Investment Assets

1995 to 2004



2004 to 2013



The Portfolio Investment Assets data on reported portfolio investment assets (equity and debt securities) are sourced from the IMF's Coordinated Portfolio Investment Survey (CPIS) database. The purpose of the CPIS is to collect information on the stock of cross-border holdings of equities and long- and short-term debt securities valued at market prices prevailing at the time of the CPIS, and broken down by the economy of residence of the issuer.

1995 to 2004:

The data are available from 2001 onwards where Indonesia and Brazil Portfolio Investment assets are near to constant, however in South Africa, Portfolio Investment Assets has increased gradually. The data is not available for China's and India's.

2004 to 2013:

Portfolio Investment Assets was unstable in the period from 2007 to 2009. It reflected an increasing trend in South Africa and Indonesia from 2009 onwards. India's portfolio investment assets were constant.

6.14.2. Developed Countries – USA, UK, Japan, Germany, France

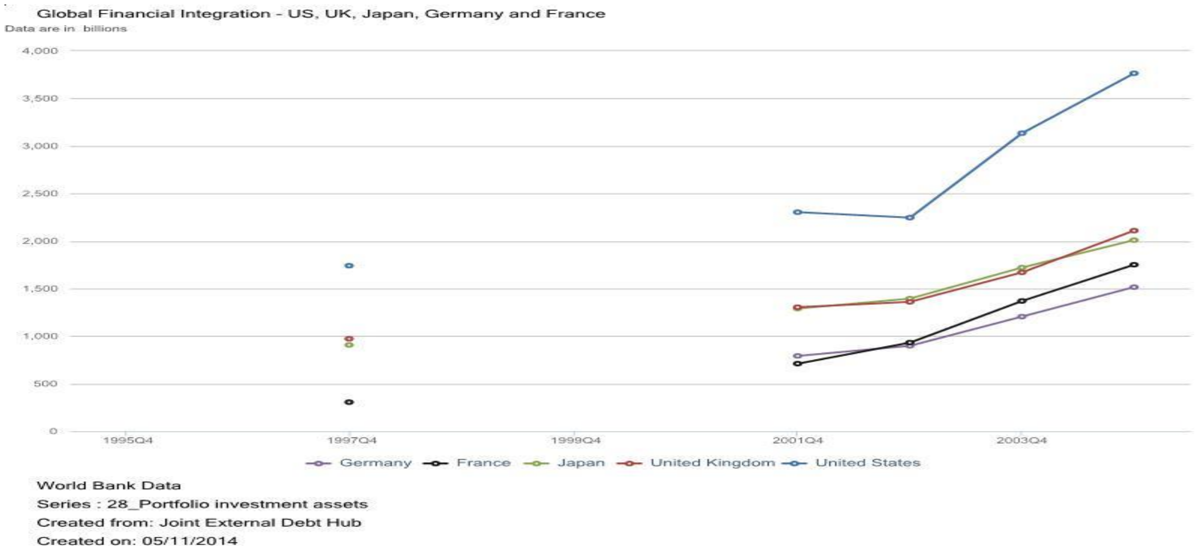
1995 to 2004:

The data of 1994 to 2000 are not available. The portfolio investment assets reflects an increased pattern from 2001 onwards.

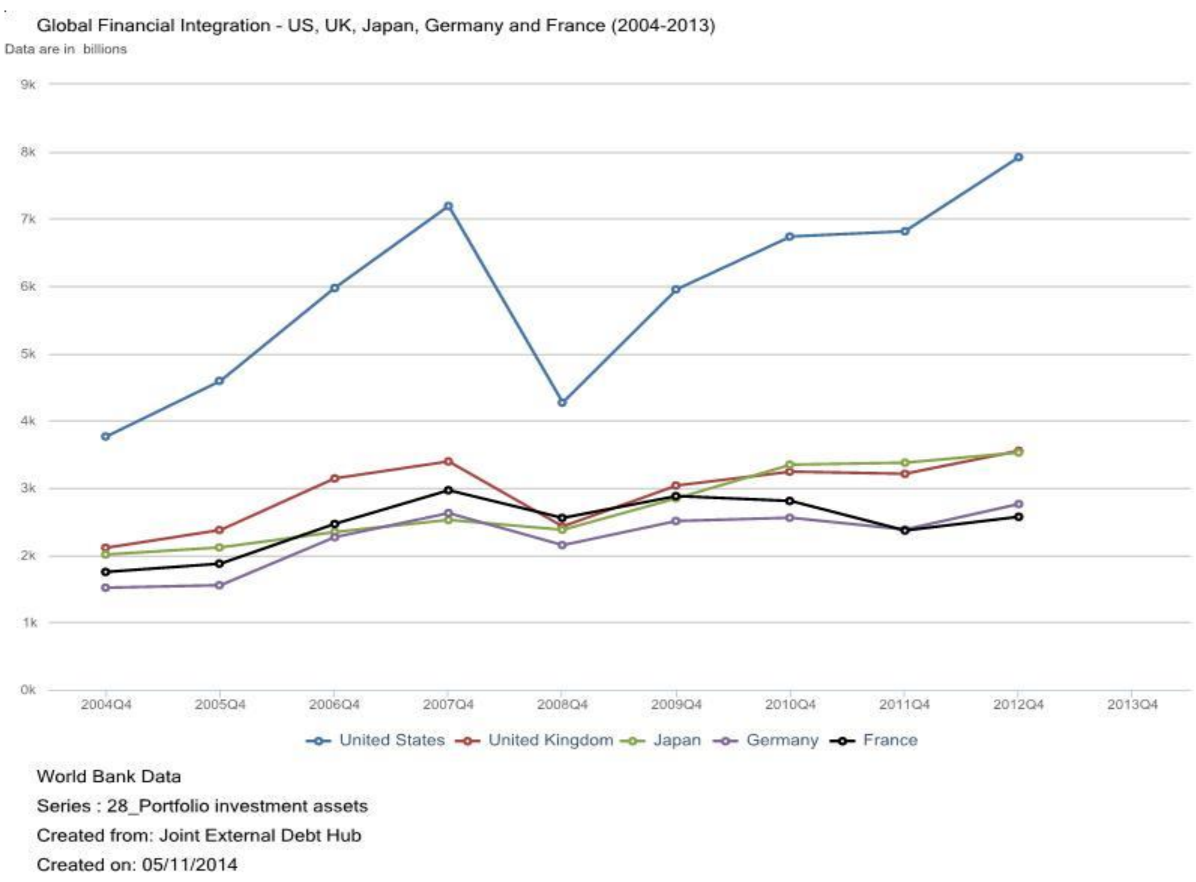
2004 to 2013:

Portfolio Investment Assets (PIA) has risen from 2004 to 2007 in all sample developed countries. PIA was unstable in the period of 2007 to 2009, after which an increasing trend is reflected excluding in France.

1995 to 2004



2004 to 2013

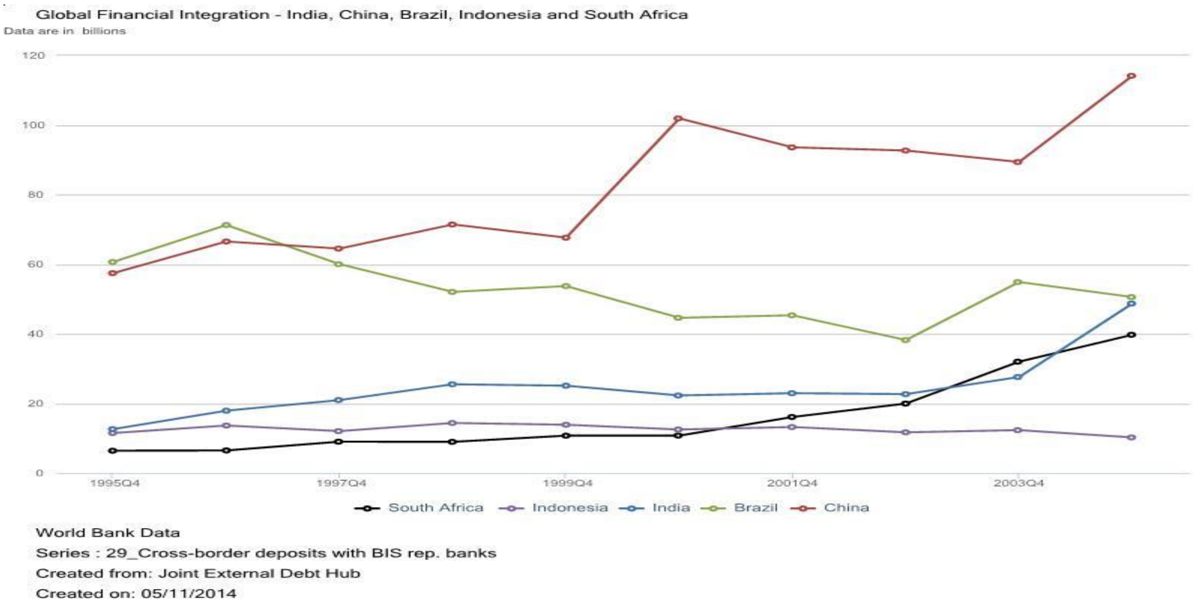


6.15. Cross-border deposits with BIS rep. Banks:

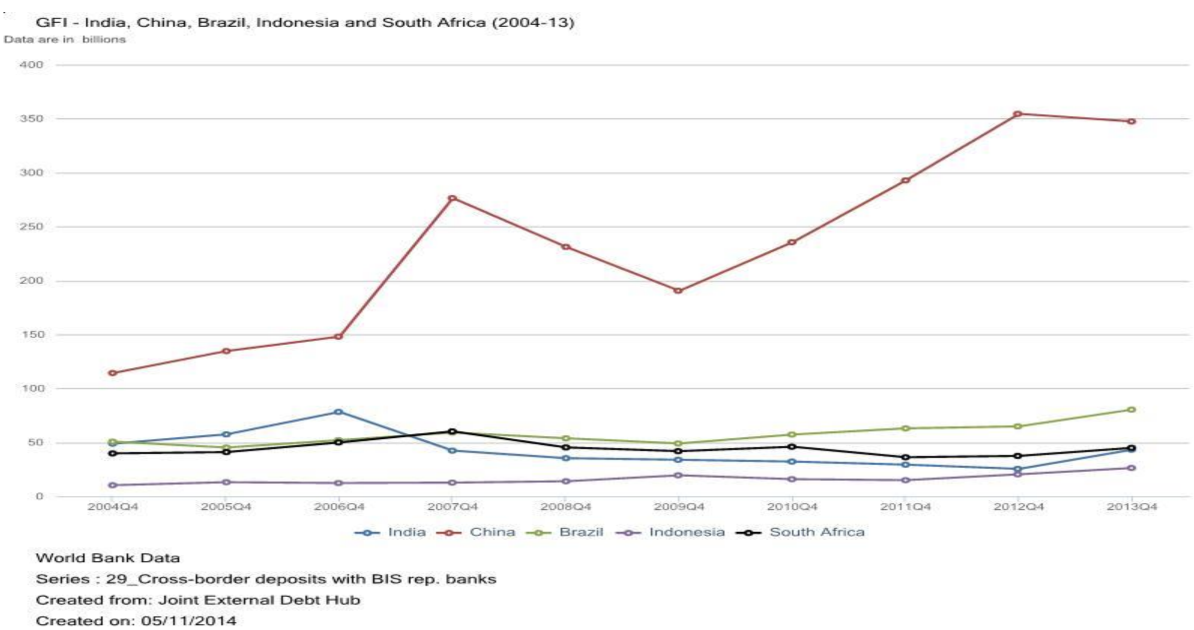
6.15.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.O: Cross-border deposits with BIS rep. Banks

1995 to 2004



2004 to 2013



The Cross-border deposit (with BIS banks, nonbanks) data is derived from the BIS locational banking statistics. Deposits with BIS reporting banks are shown in BIS publications as banks' liabilities to their creditors.

1995 to 2004:

Cross-border deposits (with BIS rep. Banks) was unstable in the period from 1997 to 1999 in the sample developed countries. In Indonesia, India and Brazil, CBD BB reflected a decreasing trend whereas it showed an increasing trend in China and South Africa from 1999 onwards.

2004 to 2013:

Cross-border deposits (with BIS rep. Banks) was unstable in the period of 2006 to 2009. After 2009, in China and Brazil, it reflected an increasing trends whereas, in India, South Africa and Indonesia, it reflected a decreasing trend. China’s CBD BB increased at a high rate in comparison with other sample emerging countries.

6.15.2. Developed Countries – USA, UK, Japan, Germany, France

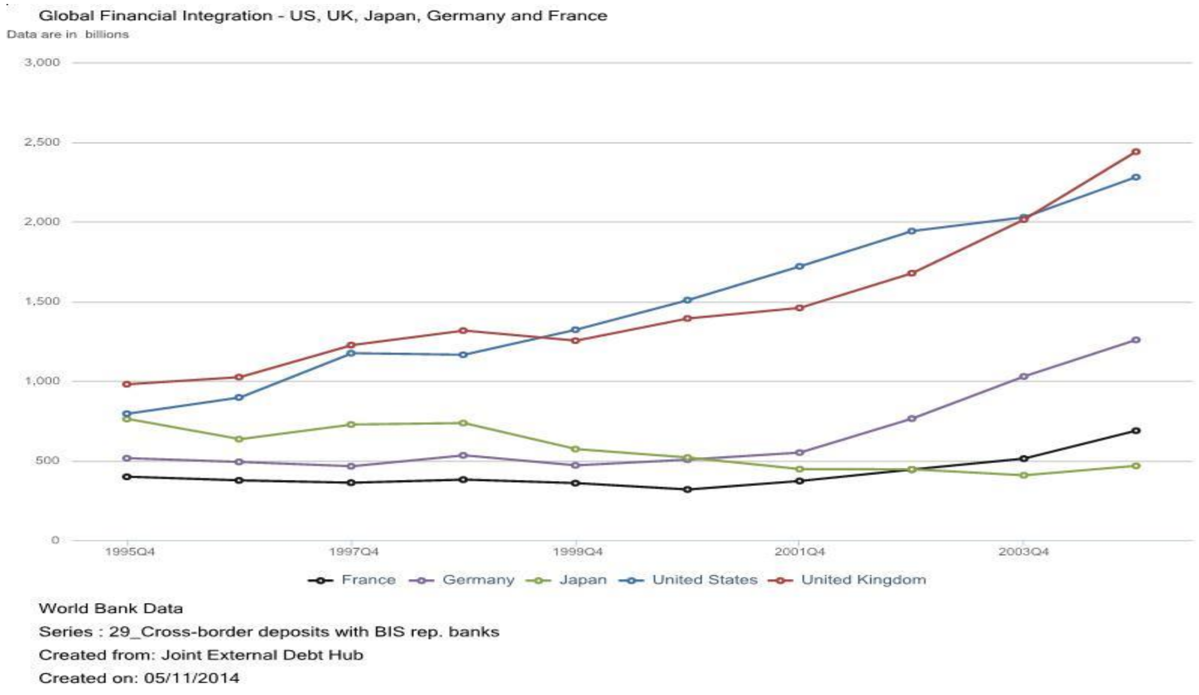
1995 to 2004:

Cross-border deposits (with BIS rep. Banks) was volatile in the period from 1997 to 1999. From 1999 onwards, CBD BB increased in Germany, France, UK, US whereas it declined in Japan.

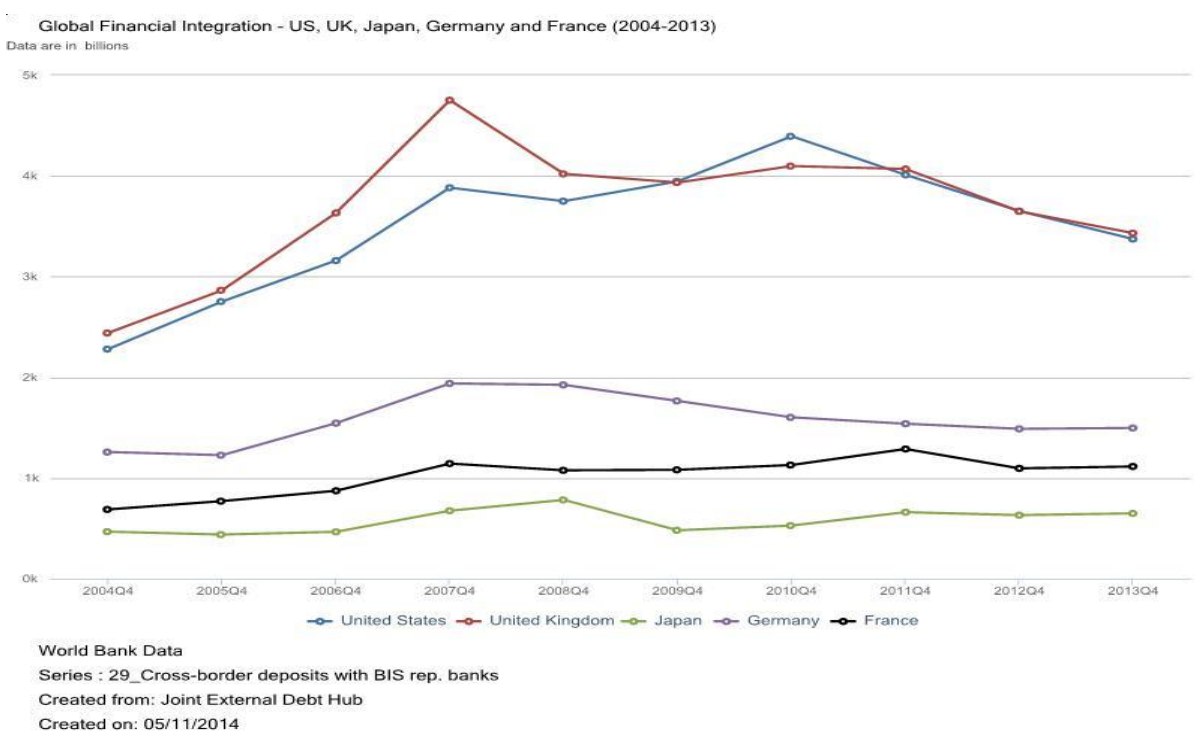
2004 to 2013:

Cross-border deposits (with BIS rep. Banks) was unstable in the period from 2007 to 2010. It increased from 2004 to 2007 in US, UK, Germany France and Japan. It showed a decreasing trend from 2011 onwards in the sample developed countries.

1995 to 2004



2004 to 2013

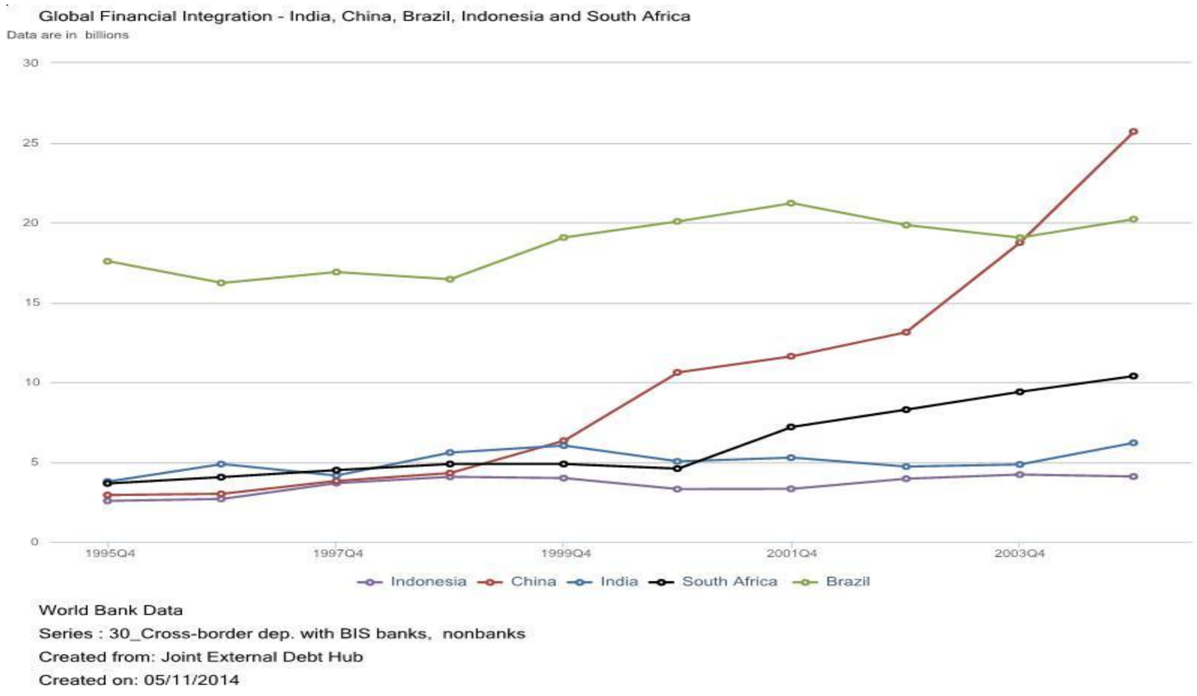


6.16. Cross-border deposit with BIS banks, nonbanks:

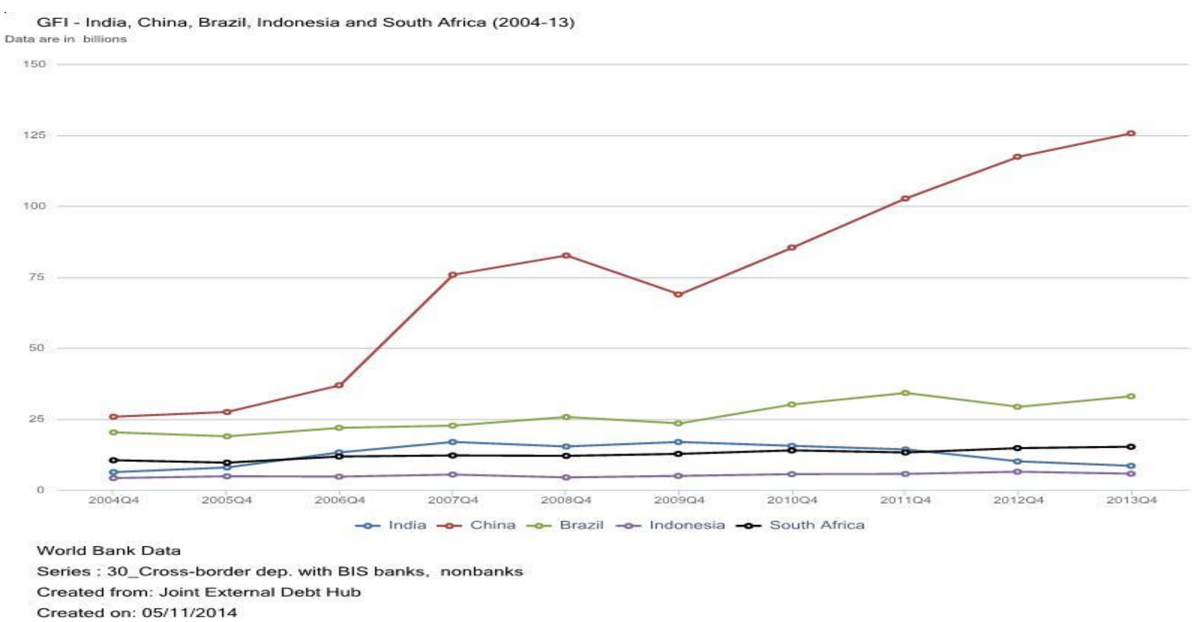
6.16.1. Emerging Countries – India, China, Brazil, Indonesia, South Africa

Figure XV.P: Cross-border deposit with BIS banks, nonbanks

1995 to 2004



2004 to 2013



The data is derived from the BIS locational banking statistics. Deposits with BIS reporting banks are shown in BIS publications as banks' liabilities to their creditors.

1995 to 2004:

Cross-border deposit (with BIS banks, nonbanks) was volatile in the period from 1997 to 2000 in the sample emerging countries excluding China. It increased at a significant rate in China during the time interval.

2004 to 2013:

Cross-border deposit (with BIS banks, nonbanks) was volatile with a narrow range in China, Brazil and India in the period from 2006 to 2009. It was constant in Indonesia and South Africa throughout the period.

6.16.2. Developed Countries – USA, UK, Japan, Germany, France

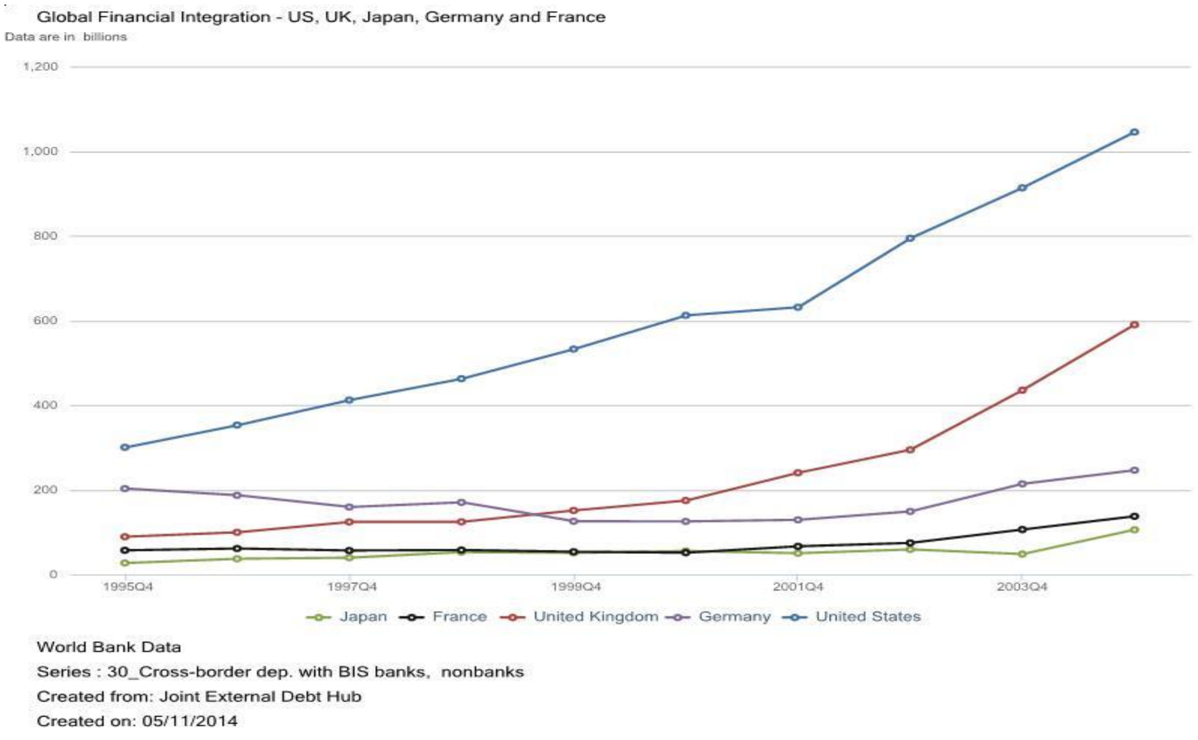
1995 to 2004:

Cross-border deposit (with BIS banks, nonbanks) was volatile in the period 1997 to 2000 in UK, Germany, France and Japan. It increased at a high rate in UK and US. From 2002 onwards, it reflects an increasing trend in the sample developed countries.

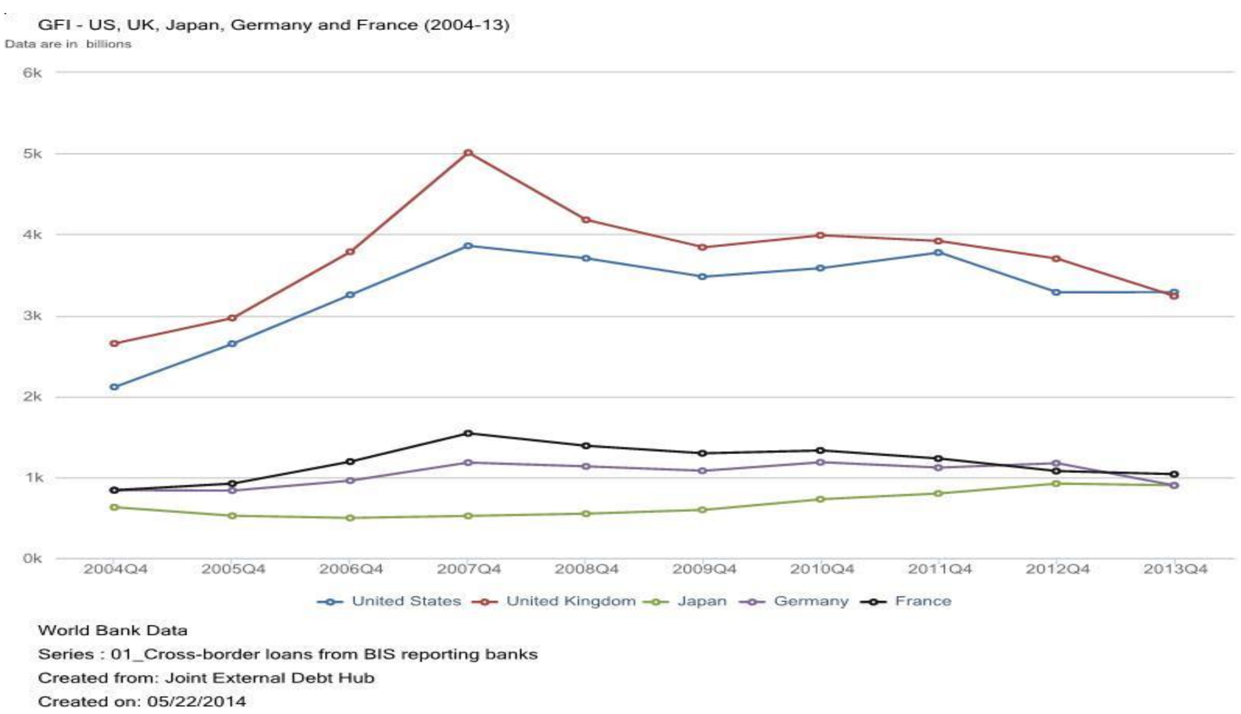
2004 to 2013:

Cross-border deposit (with BIS banks, nonbanks) was unstable from 2007 to 2011. It reflected an increasing trend from 2004 to 2007 in US, UK, Germany and France. From 2011 onwards, Cross-border deposit (with BIS banks, nonbanks) reflects a decreasing trend in the sample developed countries, excluding Japan.

1995 to 2004



2004 to 2013



7. Summary

The financial integration results in the law of one price, which means that assets will identify with risks and return and thus will command the same price. In the incident of global financial crisis, GFI spread risk to various countries. The GFI increased capital inflow in the world economy. However, the cases of Asian financial crisis and Euro crisis reflect that inefficient utilization of financial resources resulted in the external debt crisis. Therefore, the prerequisite of GFI is based on sound macro-prudential regulation.

GFI should not be considered without risk and cost. There are many instances where due to GFI, markets have failed severely. This phenomenon led to capital flight from weak financial system to strong financial system. Some of the empirical studies of foreign banks have stated that there is limited benefit from financial openness and that there is a direct relationship between capital account liberalization and financial market volatility. The capital flows are linked with speculative pressure. The private capital flow is channelled to the domestic economy through commercial bank credit where the internal or external shock may lead to high fluctuations in capital flows.

The Global financial integration framework provides a platform to investors for portfolio diversification and opportunities for getting greater returns based on market forces. Though, the capital inflow may lead to increase in potential growth and welfare gains, however, the risk and volatility of capital flow in the open economy may cost the economy in the form of the problem of systematic risk. This can result in massive capital outflows and vulnerability of a country's currency. This type of contagion is often said to be caused by financial panics, herd behaviour, loss of confidence, and increased risk aversion. The Asian financial crisis, Global financial crisis, and Euro currency crisis have borne the burden of financial openness.

Global financial integration per se is not wrong. The GFI has enhanced the quality and standard of access to financial services, led to technological up-gradation, reduced information gap between services provider and service users, implemented international financial rules and regulation and allowed the domestic financial institutions to establish overseas services in other parts of the world. The assets seek a higher return and the opportunity to diversify risk internationally. Many countries have liberalized their capital account in a phased manner which has augmented demand for private capital flows. However, these features have also increased systemic risks. Such that, all small domestic shocks will have the potential to lead to global market failure because of the interconnection of the global financial system with the national financial system. For example, the cross-border capital flows (include – FDI, Equity and Bonds) increased from 0.5 dollar trillion in 1989 to 11.8 dollar trillion in 2007. After the GFC, the cross-border capital flows reduced to 1.7 trillion and stands at 60 % below peak level.

The data of Cross-border loans from BIS reporting banks and Cross-border loans from BIS banks to non-banks, Liabilities to BIS (Cons., short term), Liabilities to BIS banks (locational, total) and Liabilities to BIS banks (Consolidated, total) increased during time interval of 1995 to 1997 and 2004 to 2007 and reduced from 1998 to 2000 and 2008 to 2010 in sample developed and developing countries. The similar trend was observed in Cross-border deposits with BIS rep. banks, and Cross-border deposit with BIS banks (nonbanks) during the same time interval. The SDR allocation and SDR holdings were stable**.** However, due to liquidity problem during GFC, the volume of SDRs increased from 2009 onwards (4^{th} Amendment of IMF, New Arrangements to Borrow, or NAB) in both sampled developed and developing countries. International Debt Securities (all Maturities and nonbanks) and International debt securities (short-term and nonbanks-short term) were volatile during the period of 1997 to 1999 and 2008 to 2010 in the sample emerging countries and developed countries. However, the intensity of negative cascading effect was significantly high in GFC as compared to Asian Financial Crisis because of global financial integration.

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Annexure 4.1

Joint External Debt Hub: World Bank, IMF, BIS, and OECD together jointly work on International Debt Statistic

Sample Countries: Emerging Countries – India, China, Brazil, Indonesia, South Africa

Time Interval: 1996 to 2004 and 2004 to 2013

Scale (Precision): Billions (0.000)

Table Ind Desc	List_attr	India	China	Brazil	Indonesia	South Africa
01_Cross-border loans from BIS reporting banks	1996Q4	18.968	77.922	78.233	55.85	15.473
	1997Q4	19.658	82.688	93.258	62.248	16.465
	1998Q4	19.698	76.611	71.814	48.969	16.029
	1999Q4	20.429	62.144	65.266	43.06	14.741
	2000Q4	18.292	52.193	60.601	38.192	14.066
	2001Q4	15.995	46.266	64.257	31.576	14.539
	2002Q4	17.898	36.631	57.763	27.697	14.542
	2003Q4	27.645	50.672	57.526	25.428	14.215
	2004Q4	35.318	73.748	51.657	26.6	13.935
	2005Q4	43.497	90.463	53.026	30.219	16.181
	2006Q4	56.857	101.529	65.322	33.961	23.596
	2007Q4	90.818	130.832	94.905	40.693	30.065
	2008Q4	113.564	114.31	106.123	38.666	29.663
	2009Q4	108.494	123.675	92.526	39.845	27.258
	2010Q4	150.232	251.629	143.027	50.203	28.809
	2011Q3	177.094	410.509	181.272	56.732	27.496
	2011Q4	171.543	372.028	184.376	56.648	24.963
	2012Q4	177.531	393.507	182.211	59.538	28.956
	2013Q4	171.64	696.081	194.287	68.748	30.107
02_Cross-border loans from BIS banks to nonbanks	1996Q4	10.087	17.081	32.735	33.108	6.526
	1997Q4	9.83	15.778	39.185	36.821	6.583
	1998Q4	11.117	13.895	35.351	33.407	6.937
	1999Q4	13.111	15.436	32.464	29.875	6.582
	2000Q4	11.327	11.896	27.456	24.751	6.587
	2001Q4	9.44	10.711	30.369	21.417	5.512
	2002Q4	9.884	8.785	29.751	19.72	5.797
	2003Q4	11.323	10.131	30.282	19.672	6.92
	2004Q4	14.728	15.474	28.162	18.264	6.294

	2005Q4	16.045	22.613	27.758	17.875	6.368
	2006Q4	24.729	23.024	37.628	19.896	10.024
	2007Q4	36.359	35.549	40.277	20.099	12.214
	2008Q4	47.505	40.223	50.984	19.939	10.041
	2009Q4	45.697	39.061	52.599	20.276	9.81
	2010Q4	63.8	65.662	69.237	25.678	10.482
	2011Q3	74.59	113.416	88.421	29.357	12.134
	2011Q4	75.014	117.292	90.098	30.175	11.737
	2012Q4	90.515	157.374	91.812	41.391	15.372
	2013Q4	86.624	242.554	105.666	47.297	17.005
11_SDR allocation	1996Q4	0.979	0.341	0.516	0.344	0.317
	1997Q4	0.919	0.32	0.484	0.322	0.297
	1998Q4	0.959	0.333	0.505	0.336	0.31
	1999Q4	0.935	0.325	0.492	0.328	0.302
	2000Q4	0.888	0.309	0.467	0.311	0.287
	2001Q4	0.856	0.298	0.451	0.3	0.277
	2002Q4	0.926	0.322	0.488	0.325	0.3
	2003Q4	1.012	0.352	0.533	0.355	0.327
	2004Q4	1.058	0.368	0.557	0.371	0.342
	2005Q4	0.974	0.338	0.513	0.342	0.315
	2006Q4	1.025	0.356	0.54	0.359	0.332
	2007Q4	1.076	0.374	0.567	0.378	0.348
	2008Q4	1.049	0.365	0.552	0.368	0.339
	2009Q4	6.237	10.958	4.526	3.105	2.799
	2010Q4	6.127	10.764	4.446	3.05	2.75
	2011Q3	6.213	10.915	4.509	3.093	2.788
	2011Q4	6.108	10.731	4.432	3.041	2.741
	2012Q4	6.114	10.743	4.437	3.044	2.744
	2013Q4	6.127	10.764	4.446	3.05	2.75
12_Liabilities to BIS banks (cons.), short term	1996Q4	7.137	26.879	42.835	34.248	10.891
	1997Q4	7.646	33.382	48.582	35.104	14.019
	1998Q4	7.741	31.351	39.789	23.702	12.376
	1999Q4	8.619	18.921	34.39	19.034	13.469
	2000Q4	8.96	19.297	33.555	20.095	11.098
	2001Q4	6.469	19.408	32.05	16.959	9.701

	2002Q4	6.355	19.745	23.104	13.342	8.8
	2003Q4	15.501	28.819	26.703	13.258	8.456
	2004Q4	25.223	42.243	22.921	15.976	9.202
	2005Q4	31.182	61.372	26.576	17.821	7.42
	2006Q4	43.552	79.16	36.987	21.399	14.299
	2007Q4	75.497	120.435	52.225	28.542	15.11
	2008Q4	69.185	101.959	47.805	27.766	12.595
	2009Q4	84.96	153.801	74.067	30.471	12.761
	2010Q4	126.11	284.233	101.684	41.655	14.156
	2011Q3	139.211	409.239	107.446	48.886	17.71
	2011Q4	137.874	390.186	112.255	48.863	15.324
	2012Q4	145.128	408.45	113.527	52.909	14.314
	2013Q4	125.835	698.802	97.216	54.113	13.847
15_International debt securities, all maturities	1996Q4	4.514	12.564	71.799	5.722	3.721
	1997Q4	6.083	14.504	79.49	6.455	3.899
	1998Q4	5.844	13.957	76.118	5.583	4.768
	1999Q4	4.904	13.585	79.024	3.398	5.503
	2000Q4	4.429	12.688	84.791	2.763	6.023
	2001Q4	3.967	12.339	78.319	1.857	6.314
	2002Q4	3.492	10.989	78.157	1.895	7.982
	2003Q4	3.489	11.838	86.467	2.629	10.131
	2004Q4	5.923	14.112	82.388	4.01	11.082
	2005Q4	9.026	15.529	81.673	6.574	11.287
	2006Q4	16.216	14.117	77.613	8.011	14.027
	2007Q4	27.867	18.998	81.854	10.214	22.323
	2008Q4	29.164	20.338	76.104	13.46	19.139
	2009Q4	30.474	21.954	91.234	20.955	21.393
	2010Q4	28.455	22.698	117.92	24.735	25.892
	2011Q3	27.646	26.535	134.287	28.488	30.598
	2011Q4	26.066	27.194	137.954	31.311	30.175
	2012Q4	19.437	38.629	152.747	43.441	32.071
	2013Q4	23.141	51.531	156.476	52.477	32.757
16_International debt securities, nonbanks	1996Q4	3.42	8.638	59.486	3.974	3.472
	1997Q4	4.9	9.991	66.982	4.496	3.718
	1998Q4	4.623	10.481	62.297	4.404	4.552

	1999Q4	3.733	9.89	66.969	2.353	5.289
	2000Q4	3.355	9.224	72.81	1.843	5.847
	2001Q4	3.067	8.818	66.255	1.102	6.198
	2002Q4	2.842	7.459	67.666	1.16	7.817
	2003Q4	2.689	8.263	74.554	1.219	9.911
	2004Q4	4.573	8.836	72.514	2.32	10.813
	2005Q4	7.532	8.046	72.317	5.224	11.038
	2006Q4	13.644	6.847	67.877	6.661	13.791
	2007Q4	20.355	9.539	68.387	9.014	20.687
	2008Q4	21.679	9.067	64.448	12.71	17.609
	2009Q4	22.891	10.284	74.886	20.405	19.763
	2010Q4	20.852	12.12	89.523	24.284	24.175
	2011Q3	19.198	18.407	96.331	28.038	28.623
	2011Q4	18.501	19.105	99.602	30.86	28.212
	2012Q4	14.38	27.444	112.846	42.991	29.997
	2013Q4	17.398	39.015	120.074	51.387	30.371
17_International debt securities, short term	1996Q4	0.46	1.056	9.766	0.865	0.713
	1997Q4	0.336	2.146	15.285	1.001	0.17
	1998Q4	1.201	1.838	6.542	1.543	1.179
	1999Q4	0.532	1.032	10.147	0.632	0.591
	2000Q4	0.544	2.078	17.705	0.916	0.508
	2001Q4	0.759	2.573	8.292	0.262	0.489
	2002Q4	0.462	1.175	6.97	0.15	0.268
	2003Q4	0.822	2.331	13.689	0.12	0.905
	2004Q4	0.15	0.584	17.623	0.508	0.953
	2005Q4	0.125	1.729	18.87	0.679	1.062
	2006Q4	1.049	0.818	9.143	0.522	1.235
	2007Q4	0.867	1.92	9.168	0.954	1.892
	2008Q4	2.725	2.194	5.213	0.625	2.003
	2009Q4	3.884	2.433	8.124	0.417	0.775
	2010Q4	6.75	4.11	7.384	0.775	0.569
	2011Q3	9.372	2.795	5.05	0.413	3.889
	2011Q4	11.012	4.148	5.451	0.588	4.116
	2012Q4	0.931	5.231	11.852	0.725	6.03
	2013Q4	3.272	13.568	8.788	3.725	3.202

18_Intnl debt securities, nonbanks, short term	1996Q4	0.286	0.506	3.607	0.367	0.618
	1997Q4	0.336	0.981	12.794	0.664	0.039
	1998Q4	1.028	0.832	3.082	1.409	1.18
	1999Q4	0.357	0.669	7.744	0.507	0.588
	2000Q4	0.37	1.67	15.001	0.751	0.508
	2001Q4	0.509	1.559	4.833	0.092	0.489
	2002Q4	0.312	1.175	5.426	0.15	0.268
	2003Q4	0.572	1.681	9.877	0.1	0.904
	2004Q4	0.15	0.384	14.068	0.068	0.953
	2005Q4	0.1	1.472	16.625	0.679	1.062
	2006Q4	0.783	0.188	7.086	0.372	1.235
	2007Q4	0.533	1.908	4.958	0.504	1.892
	2008Q4	1.925	0.524	3.497	0.325	2.003
	2009Q4	3.24	0	4.655	0.317	0.769
	2010Q4	5.612	1.332	5.441	0.775	0.569
	2011Q3	6.916	1.241	3.423	0.413	2.573
	2011Q4	7.411	2.483	3.626	0.588	2.81
	2012Q4	0.768	3.697	4.508	0.5	5.786
	2013Q4	3.122	9.043	2.996	3.725	2.86
21_Debt securities held by nonresidents	1996Q4	0	0	0	0	0
	1997Q4	4.362	10.205	37.505	5.491	8.025
	1998Q4	0	0	0	0	0
	1999Q4	0	0	0	0	0
	2000Q4	0	0	0	0	0
	2001Q4	2.125	7.178	47.502	1.873	6.867
	2002Q4	1.243	6.432	39.53	3.117	7.798
	2003Q4	1.869	7.203	61.346	5.259	12.868
	2004Q4	6.322	11.499	63.529	6.292	15.79
	2005Q4	11.103	16.057	68.135	10.058	17.619
	2006Q4	21.252	15.758	72.03	14.517	17.792
	2007Q4	30.535	21.745	82.941	19.806	21.485
	2008Q4	26.018	23.139	77.026	15.524	15.447
	2009Q4	37.648	27.546	126.064	28.111	23.508
	2010Q4	63.132	62.324	197.869	44.428	36.17
	2011Q3	NA	NA	NA	NA	NA

	2011Q4	56.777	106.02	215.044	47.415	42.097
	2012Q4	63.247	137.539	295.628	61.082	55.368
	2013Q4	NA	NA	NA	NA	NA
24_Liabilities to BIS banks, locational, total	1996Q4	19.979	79.75	90.07	57.849	16.629
	1997Q4	21.096	89.373	104.386	64.494	19.736
	1998Q4	21.604	82.37	94.276	52.643	19.574
	1999Q4	22.203	67.589	87.148	46.711	18.357
	2000Q4	20.437	59.741	95.444	41.913	18.564
	2001Q4	18.436	54.15	94.999	35.068	17.76
	2002Q4	19.639	44.041	87.639	31.118	18.418
	2003Q4	31.132	61.769	83.158	29.124	18.569
	2004Q4	41.812	87.551	77.417	30.401	19.679
	2005Q4	52.581	106.529	84.916	33.526	20.431
	2006Q4	73.591	127.711	104.745	38.795	29.043
	2007Q4	121.377	188.906	156.832	46.833	37.567
	2008Q4	134.772	153.542	157.139	44.203	36.404
	2009Q4	134.398	177.236	165.797	46.628	36.158
	2010Q4	185.621	330.758	248.411	59.246	38.275
	2011Q3	210.058	513.346	280.512	67.558	35.901
	2011Q4	201.864	477.156	280.368	66.895	31.614
	2012Q4	217.609	523.476	287.699	75.453	36.356
	2013Q4	200.919	901.2	299.992	82.759	36.459
25_Liabilities to BIS banks, consolidated, total	1996Q4	16.896	55.002	67.946	55.523	16.964
	1997Q4	19.804	86.08	75.535	60.692	21.04
	1998Q4	19.698	79.353	70.65	46.618	20.487
	1999Q4	22.328	63.48	63.569	41.656	20.746
	2000Q4	22.162	58.228	67.608	40.213	18.281
	2001Q4	18.136	52.261	68.056	33.79	17.953
	2002Q4	17.61	43.691	53.137	28.23	17.582
	2003Q4	30.21	56.537	55.66	27.836	18.688
	2004Q4	42.826	80.422	52.953	30.465	21.961
	2005Q4	55.29	94.756	59.612	33.326	18.418
	2006Q4	82.972	141.735	80.449	40.671	28.263
	2007Q4	141.764	213.414	110.848	49.918	33.712
	2008Q4	133.131	173.135	105.173	50.346	29.816

	2009Q4	149.854	224.18	160.291	53.287	32.236
	2010Q4	203.455	371.922	207.688	71.253	33.612
	2011Q3	224.456	531.249	223.896	81.542	36.604
	2011Q4	223.177	516.014	226.131	82.63	34.872
	2012Q4	246.021	562.539	231.534	95.573	36.369
	2013Q4	215.548	885.091	200.208	103.036	32.456
26_International reserves (excluding gold)	1996Q4	20.17	107.039	58.323	18.251	0.942
	1997Q4	24.688	142.762	50.827	16.587	4.799
	1998Q4	27.341	149.188	42.58	22.713	4.357
	1999Q4	32.667	157.728	35.279	26.445	6.353
	2000Q4	37.902	168.278	32.434	28.502	6.083
	2001Q4	45.87	215.605	35.563	27.246	6.045
	2002Q4	67.665	291.128	37.462	30.971	5.904
	2003Q4	98.938	408.151	48.847	34.962	6.496
	2004Q4	126.593	614.5	52.462	34.952	13.141
	2005Q4	131.924	821.514	53.245	33.14	18.579
	2006Q4	170.738	1068.493	85.156	41.103	23.057
	2007Q4	266.988	1530.282	179.433	54.976	29.589
	2008Q4	247.419	1949.26	192.844	49.597	30.584
	2009Q4	265.182	2416.044	237.364	63.563	35.237
	2010Q4	275.277	2866.079	287.056	92.908	38.175
	2011Q3	283.821	3222.987	347.954	110.673	43.208
	2011Q4	271.285	3202.789	350.356	106.539	42.595
	2012Q4	270.587	3331.12	369.566	108.837	43.995
	2013Q4	276.493	3839.548	356.214	96.364	44.864
27_SDR holdings	1996Q4	0.122	0.614	0.001	0.002	0.001
	1997Q4	0.077	0.602	0.001	0.499	0.009
	1998Q4	0.083	0.676	0.002	0.312	0.185
	1999Q4	0.004	0.741	0.01	0	0.288
	2000Q4	0.002	0.798	0	0.032	0.29
	2001Q4	0.005	0.851	0.011	0.016	0.28
	2002Q4	0.007	0.998	0.275	0.019	0.303
	2003Q4	0.003	1.102	0.002	0.004	0.331
	2004Q4	0.005	1.247	0.004	0.002	0.346
	2005Q4	0.004	1.251	0.029	0.007	0.319

	2006Q4	0.001	1.068	0.008	0.018	0.335
	2007Q4	0.003	1.192	0.002	0.009	0.352
	2008Q4	0.003	1.199	0.001	0.034	0.344
	2009Q4	5.169	12.51	4.527	2.763	2.803
	2010Q4	5.078	12.344	4.45	2.714	2.754
	2011Q3	4.504	12.101	4.045	2.751	2.792
	2011Q4	4.429	11.856	3.979	2.704	2.745
	2012Q4	4.436	11.356	3.986	2.707	2.748
	2013Q4	4.447	11.173	3.996	2.712	2.754
28_Portfolio investment assets	1996Q4	NA	NA	NA	NA	NA
	1997Q4	NA	NA	NA	1.124	NA
	1998Q4	NA	NA	NA	NA	NA
	1999Q4	NA	NA	NA	NA	NA
	2000Q4	NA	NA	NA	NA	NA
	2001Q4	NA	NA	4.821	0.717	29.741
	2002Q4	NA	NA	3.981	0.935	30.068
	2003Q4	NA	NA	4.464	1.81	40.752
	2004Q4	0.066	NA	4.857	1.382	47.304
	2005Q4	0.081	NA	6.38	1.169	64.686
	2006Q4	0.284	NA	10.61	1.507	70.637
	2007Q4	1.104	NA	18.366	2.608	76.187
	2008Q4	0.949	NA	13.872	4.311	64.678
	2009Q4	1.366	NA	17.395	4.193	96.561
	2010Q4	1.583	NA	37.63	6.829	131.136
	2011Q3	NA	NA	NA	NA	NA
	2011Q4	1.194	NA	28.485	8.018	135.522
	2012Q4	1.021	NA	22.124	13.486	159.762
	2013Q4	NA	NA	NA	NA	NA
29_Cross-border deposits with BIS rep. banks	1996Q4	17.908	66.531	71.264	13.642	6.478
	1997Q4	20.95	64.491	60.021	12.033	8.996
	1998Q4	25.5	71.426	52.045	14.38	8.952
	1999Q4	25.09	67.63	53.718	13.865	10.735
	2000Q4	22.271	101.917	44.597	12.499	10.756
	2001Q4	22.928	93.588	45.323	13.207	16.097
	2002Q4	22.663	92.681	38.209	11.687	19.953

	2003Q4	27.586	89.379	54.886	12.321	31.998
	2004Q4	48.703	114.163	50.566	10.216	39.719
	2005Q4	57.307	134.531	45.113	13.005	40.884
	2006Q4	78.151	147.949	51.939	12.211	49.848
	2007Q4	42.27	276.32	59.04	12.6	60.095
	2008Q4	35.256	231.079	53.659	13.851	45.238
	2009Q4	33.79	190.404	48.885	19.385	41.741
	2010Q4	32.141	235.457	57.141	15.813	45.849
	2011Q3	29.527	227.341	66.074	12.974	44.213
	2011Q4	29.253	292.735	62.881	14.916	36.113
	2012Q4	25.34	354.403	64.738	20.333	37.354
	2013Q4	43.151	347.289	80.33	26.166	44.837
30_Cross-border dep. with BIS banks, nonbanks	1996Q4	4.864	3	16.213	2.678	4.045
	1997Q4	4.141	3.804	16.895	3.667	4.484
	1998Q4	5.582	4.298	16.443	4.064	4.868
	1999Q4	6.022	6.329	19.061	3.984	4.867
	2000Q4	5.032	10.607	20.071	3.293	4.576
	2001Q4	5.264	11.617	21.212	3.31	7.19
	2002Q4	4.706	13.121	19.84	3.946	8.273
	2003Q4	4.838	18.743	19.05	4.205	9.39
	2004Q4	6.194	25.699	20.209	4.083	10.377
	2005Q4	7.832	27.369	18.809	4.729	9.52
	2006Q4	13.159	36.805	21.786	4.603	11.704
	2007Q4	16.815	75.732	22.564	5.325	12.071
	2008Q4	15.225	82.527	25.629	4.333	11.915
	2009Q4	16.813	68.794	23.368	4.868	12.627
	2010Q4	15.451	85.323	30.036	5.484	13.853
	2011Q3	14.992	87.828	34.511	5.477	13.611
	2011Q4	14.177	102.617	34.093	5.561	13.121
	2012Q4	9.964	117.316	29.197	6.333	14.646
	2013Q4	8.408	125.58	32.934	5.621	15.15

Data from database: JEDH Databank (Last Updated: 05/06/2014)

Annexure: 4.2

Joint External Debt Hub: World Bank, IMF, BIS, and OECD together jointly work on International Debt Statistic

Sample Countries: Developed Countries – USA, UK, Japan, Germany, France

Time Interval: 1996 to 2004 and 2004 to 2013

Scale (Precision): Billions (0.000)

Table Ind Desc	List_attr	United States	United Kingdom	Japan	Germany	France
01_Cross-border loans from BIS reporting banks	1995Q4	895.361	985.999	989.493	361.921	307.615
	1996Q4	915.686	1032.402	895.263	331.193	308.617
	1997Q4	1218.821	1147.504	840.384	371.167	325.908
	1998Q4	1152.974	1240.46	741.76	512.541	393.32
	1999Q4	1342.203	1197.811	543.972	525.474	397.443
	2000Q4	1462.126	1364.662	488.205	564.352	422.178
	2001Q4	1659.25	1494.049	444.759	563.328	469.413
	2002Q4	1875.3	1726.592	495.63	650.629	528.624
	2003Q4	1993.783	2150.957	506.703	794.112	630.15
	2004Q4	2115.434	2653.017	628.001	840.118	840.165
	2005Q4	2649.406	2967.055	523.178	834.761	921.208
	2006Q4	3253.786	3785.897	496.936	957.646	1192.652
	2007Q4	3858.661	5010.709	521.747	1180.569	1542.64
	2008Q3	3761.817	4568.05	537.61	1246.041	1538.894
	2009Q4	3477.65	3840.713	596.561	1079.366	1295.348
	2010Q4	3583.849	3988.972	728.214	1184.951	1330.276
	2011Q4	3776.329	3917.769	799.22	1118.019	1229.82
	2012Q4	3284.224	3699.873	921.234	1173.205	1075.859
	2013Q4	3286.762	3236.204	900.253	897.181	1037.21
02_Cross-border loans from BIS banks to nonbanks	1995Q4	251.596	99.145	339.827	116.704	35.328
	1996Q4	299.007	115.958	318.86	107.28	39.444
	1997Q4	394.922	131.346	254.732	97.801	47.428
	1998Q4	401.347	133.655	172.087	114.634	69.693
	1999Q4	512.111	154.849	140.455	116.478	70.142
	2000Q4	531.32	167.659	64.058	112.736	80.434
	2001Q4	651.92	175.336	57.545	112.559	89.196
	2002Q4	741.061	219.836	69.771	119.078	95.535

	2003Q4	835.378	324.375	105.801	134.822	136.29
	2004Q4	861.579	430.411	169.517	153.879	170.266
	2005Q4	1066.619	428.287	88.881	167.554	169.282
	2006Q4	1427.404	651.715	105.318	204.213	204.53
	2007Q4	1645.412	786.9	144.582	248.885	253.252
	2008Q3	1750.37	730.816	155.842	255.192	319.04
	2009Q4	1271.9	677.289	113.104	279.8	240.963
	2010Q4	1329.647	717.958	139.01	377.617	258.667
	2011Q4	1292.708	807.071	220.418	348.562	294.185
	2012Q4	1335.812	879.322	205.027	312.688	280.847
	2013Q4	1257.826	852.493	200.776	273.01	239.068
11_SDR allocation	1995Q4	7.283	2.844	1.325	1.8	1.605
	1996Q4	7.045	2.751	1.282	1.741	1.553
	1997Q4	6.611	2.581	1.203	1.634	1.457
	1998Q4	6.899	2.694	1.256	1.705	1.52
	1999Q4	6.725	2.626	1.224	1.662	1.482
	2000Q4	6.384	2.493	1.162	1.578	1.407
	2001Q4	6.157	2.404	1.121	1.522	1.357
	2002Q4	6.661	2.601	1.212	1.646	1.468
	2003Q4	7.281	2.843	1.325	1.799	1.605
	2004Q4	7.609	2.971	1.385	1.88	1.677
	2005Q4	7.003	2.734	1.274	1.731	1.543
	2006Q4	7.371	2.878	1.341	1.821	1.625
	2007Q4	7.742	3.023	1.409	1.913	1.706
	2008Q3	7.63	2.979	1.389	1.885	1.682
	2009Q4	55.364	15.887	19.259	18.905	15.887
	2010Q4	54.387	15.607	18.919	18.571	15.607
	2011Q4	54.219	15.559	18.861	18.514	15.559
	2012Q4	54.277	15.575	18.881	18.534	15.575
	2013Q4	54.386	15.607	18.919	18.571	15.607
12_Liabilities to BIS banks (cons.), short term	1995Q4	NA	NA	NA	NA	NA
	1996Q4	NA	NA	NA	NA	NA
	1997Q4	NA	NA	NA	NA	NA
	1998Q4	NA	NA	NA	NA	NA
	1999Q4	463.043	626.129	193.788	341.66	248.992

	2000Q4	531.187	730.578	193.33	355.773	250.11
	2001Q4	561.749	774.72	186.74	377.609	250.249
	2002Q4	547.543	968.576	247.431	472.271	302.294
	2003Q4	623.262	1171.981	255.782	524.486	351.638
	2004Q4	767.612	1555.445	334.92	768.33	596.519
	2005Q4	871.817	1527.479	422.018	688.747	611.785
	2006Q4	1068.712	1983.361	375.11	762.105	883.846
	2007Q4	1306.98	2406.898	418.123	939.072	1148.75
	2008Q3	1220.343	2174.243	375.481	920.876	1154.716
	2009Q4	867.721	1716.211	466.95	738.945	956.993
	2010Q4	873.021	1629.019	555.109	863.309	1055.06
	2011Q4	967.911	1437.603	600.105	780.86	841.969
	2012Q4	914.273	1382.135	688.544	699.787	793.79
	2013Q4	904.503	1295.383	710.636	609.457	790.361
15_International debt securities, all maturities	1995Q4	NA	NA	NA	NA	NA
	1996Q4	363.446	308.756	196.992	106.265	177.049
	1997Q4	450.03	354.797	154.687	130.499	172.719
	1998Q4	606.968	431.936	132.555	168.504	211.477
	1999Q4	826.612	569.536	124.262	237.775	237.685
	2000Q4	1111.207	695.54	104.37	321.678	276.965
	2001Q4	1570.892	744.103	94.609	373.465	347.451
	2002Q4	1854.107	928.763	103.119	514.573	452.445
	2003Q4	2070.69	1290.935	118.108	726.43	630.9
	2004Q4	2219.331	1707.39	138.63	954.774	769.2
	2005Q4	2154.004	1890.222	137.789	961.183	769.309
	2006Q4	2327.214	2494.225	148.382	1183.099	988.05
	2007Q4	2534.041	3152.713	162.026	1447.334	1208.029
	2008Q3	2560.038	3412.694	172.325	1420.208	1295.969
	2009Q4	2528.101	3714.449	167.312	1358.121	1520.977
	2010Q4	2387.471	3544.642	180.816	1285.183	1597.826
	2011Q4	2161.735	3473.589	176.278	1347.452	1639.316
	2012Q4	2105.36	3466.845	181.509	1365.503	1656.71
	2013Q4	2065.564	3460.409	203.046	1356.512	1695.534
16_International debt securities, nonbanks	1995Q4	NA	NA	NA	NA	NA
	1996Q4	288.184	163.371	174.502	15.553	70.11

	1997Q4	336.374	188.103	134.707	17.561	71.732
	1998Q4	452.806	238.083	111.296	20.968	100.845
	1999Q4	629.746	327.986	102.74	28.679	116.229
	2000Q4	871.43	394.955	80.031	69.928	149.306
	2001Q4	1243.157	431.718	69.103	86.287	211.458
	2002Q4	1486.424	553.427	74.733	139.875	266.164
	2003Q4	1625.276	761.56	83.74	228.668	364.368
	2004Q4	1683.637	951.698	98.136	318.411	435.002
	2005Q4	1572.94	1019.186	91.137	359.666	408.137
	2006Q4	1613.444	1378.29	93.818	481.588	491.649
	2007Q4	1603.72	1628.516	100.018	609.392	576.967
	2008Q3	1597.481	1653.215	109.377	641.204	586.971
	2009Q4	1617.752	1786.517	103.025	709.431	816.418
	2010Q4	1530.656	1673.557	108.727	684.485	862.673
	2011Q4	1418.758	1699.77	101.077	735.552	909.785
	2012Q4	1428.671	1759.505	95.201	742.347	939.375
	2013Q4	1460.378	1854.366	96.804	763.187	959.828
17_International debt securities, short term	1995Q4	NA	NA	NA	NA	NA
	1996Q4	61.35	88.464	51.344	16	27.403
	1997Q4	69.681	89.355	37.06	20.259	25.996
	1998Q4	71.971	98.701	28.077	28.292	40.854
	1999Q4	103.183	137.454	30.163	69.612	34.795
	2000Q4	145.084	188.654	19.361	106.817	50.311
	2001Q4	209.141	168.922	16.222	99.895	58.299
	2002Q4	301.301	200.879	17.945	140.736	75.315
	2003Q4	393.013	299.257	17.87	160.07	108.305
	2004Q4	402.174	362.312	16.613	197.683	126.252
	2005Q4	416.789	430.733	16.568	162.271	122.575
	2006Q4	370.921	540.143	18.91	198.71	151.468
	2007Q4	394.018	618.361	15.968	317.25	207.886
	2008Q3	363.342	680.914	24.987	339.623	251.62
	2009Q4	380.466	563.453	25.633	315.898	243.767
	2010Q4	433.827	570.47	33.81	272.572	263.926
	2011Q4	402.086	587.563	27.737	333.239	279.279
	2012Q4	379.981	486.557	21.251	321.891	271.724

	2013Q4	336.887	458.678	20.947	330.163	319.801
18_Intnl debt securities, nonbanks, short term	1995Q4	NA	NA	NA	NA	NA
	1996Q4	47.291	39.643	46.601	2.047	8.738
	1997Q4	52.895	39.316	36.01	4.273	12.455
	1998Q4	53.671	44.012	24.387	3.299	26.003
	1999Q4	77.927	70.968	27.488	10.376	14.531
	2000Q4	99.581	92.279	15.921	34.597	26.825
	2001Q4	150.74	76.058	14.339	29.179	31.88
	2002Q4	233.148	106.222	15.161	31.595	42.469
	2003Q4	291.1	153.675	14.601	39.188	56.067
	2004Q4	299.441	178.098	11.586	55.515	63.703
	2005Q4	303.879	206.081	14.882	52.97	59.076
	2006Q4	291.141	273.601	16.255	73.556	56.4
	2007Q4	253.866	237.362	11.578	122.917	88.677
	2008Q3	238.629	213.468	21.827	141.916	87.269
	2009Q4	258.206	157.66	15.528	144.942	102.163
	2010Q4	276.554	166.41	27.158	140.465	121.504
	2011Q4	263.796	178.689	20.446	203.337	141.893
	2012Q4	237.057	144.545	13.322	172.889	134.064
	2013Q4	216.989	139.222	9.943	193.521	166.911
21_Debt securities held by nonresidents	1995Q4	0	0	0	0	0
	1996Q4	0	0	0	0	0
	1997Q4	908.77	230.836	121.922	410.596	94.982
	1998Q4	0	0	0	0	0
	1999Q4	0	0	0	0	0
	2000Q4	0	0	0	0	0
	2001Q4	2077.457	576.651	208.238	895.304	386.501
	2002Q4	2377.82	710.879	205.365	1162.734	555.587
	2003Q4	2894.668	938.435	233.789	1521.132	894.548
	2004Q4	3387.998	1217.579	290.089	1700.881	1039.178
	2005Q4	3614.337	1235.577	320.603	1627.874	1003.511
	2006Q4	4235.453	1678.743	343.829	1929.516	1304.463
	2007Q4	4972.822	2014.467	427.636	2238.068	1457.102
	2008Q3	NA	NA	NA	NA	NA
	2009Q4	5301.33	2130.248	456.878	2272.461	1944.54

	2010Q4	6044.54	2060.595	533.271	2213.893	2011.916
	2011Q4	6143.892	2007.395	669.044	2226.944	2048.297
	2012Q4	6247.648	2003.203	654.037	2337.069	2136.833
	2013Q4	NA	NA	NA	NA	NA
24_Liabilities to BIS banks, locational, total	1995Q4	1147.834	1025.889	1021.581	518.109	347.587
	1996Q4	1214.376	1085.681	925.773	515.975	352.712
	1997Q4	1570.251	1215.047	912.381	554.056	385.535
	1998Q4	1624.564	1333.782	846.893	730.968	465.861
	1999Q4	1793.243	1300.341	622.904	764.627	486.418
	2000Q4	2067.234	1494.114	575.894	812.381	535.248
	2001Q4	2344.956	1656.229	518.081	834.45	600.622
	2002Q4	2661.22	1919.447	574.071	997.729	687.449
	2003Q4	2865.459	2409.732	613.32	1227.606	866.888
	2004Q4	3194.271	3038.203	749.099	1334.797	1131.283
	2005Q4	3914.473	3367.57	670.796	1374.552	1223.733
	2006Q4	4738.588	4340.5	645.233	1449.775	1545.211
	2007Q4	5587.047	5723.018	662.716	1788.105	1961.47
	2008Q3	5348.34	5406.861	655.577	1853.645	1952.606
	2009Q4	5014.46	4696.184	684.348	1697.362	1749.066
	2010Q4	5223.167	4898.229	811.611	1790.032	1772.033
	2011Q4	5429.137	4917.919	900.165	1672.604	1702.692
	2012Q4	5004.644	4791.082	1024.741	1752.774	1644.095
	2013Q4	4889.341	4318.074	1011.396	1457.411	1651.128
25_Liabilities to BIS banks, consolidated, total	1995Q4	NA	NA	NA	NA	NA
	1996Q4	NA	NA	NA	NA	NA
	1997Q4	9.944	12.661	308.525	5.679	8.584
	1998Q4	8.838	22.379	203.63	6.944	11.505
	1999Q4	1036.448	883.899	439.091	613.564	410.342
	2000Q4	1246.499	1039.174	395.614	653.91	430.745
	2001Q4	1386.349	1096.372	341.454	702.807	453.031
	2002Q4	1428.086	1327.014	382.923	882.242	532.423
	2003Q4	1522.562	1559.799	399.789	1028.298	650.696
	2004Q4	1844.432	2056.045	512.44	1371.857	988.561
	2005Q4	2108.537	2037.13	555.896	1242.094	1034.164
	2006Q4	2705.272	2658.376	545.21	1421.264	1389.12

	2007Q4	3052.851	3310.814	581.175	1687.526	1765.988
	2008Q3	2933.871	3046.627	509.628	1650.042	1725.432
	2009Q4	2495.003	2573.194	591.411	1501.073	1571.001
	2010Q4	2548.61	2423.722	690.828	1513.83	1636.411
	2011Q4	2785.207	2300.835	724.181	1333.102	1373.103
	2012Q4	2634.732	2211.407	798.91	1320.974	1427.222
	2013Q4	2495.762	2031.313	843.992	1191.637	1466.115
26_International reserves (excluding gold)	1995Q4	74.781	42.016	183.25	85.005	26.853
	1996Q4	64.041	39.896	216.648	83.178	26.796
	1997Q4	58.907	32.317	219.648	77.587	30.927
	1998Q4	70.715	32.212	215.471	74.024	44.312
	1999Q4	60.5	33.297	286.916	61.039	39.701
	2000Q4	56.6	38.774	354.902	56.89	37.039
	2001Q4	57.634	34.189	395.155	51.404	31.749
	2002Q4	67.962	37.55	461.186	51.171	28.365
	2003Q4	74.894	35.349	663.289	50.694	30.186
	2004Q4	75.89	39.942	833.891	48.823	35.314
	2005Q4	54.084	38.467	834.275	45.14	27.753
	2006Q4	54.854	40.698	879.682	41.687	42.652
	2007Q4	59.524	48.958	952.784	44.327	45.71
	2008Q3	60.793	42.384	974.13	44.522	41.493
	2009Q4	119.719	55.702	1022.236	59.925	46.633
	2010Q4	121.392	68.345	1061.49	62.295	55.8
	2011Q4	136.912	79.272	1258.172	66.928	48.612
	2012Q4	139.134	88.596	1227.147	67.422	54.231
	2013Q4	133.534	92.404	1237.218	67.365	50.849
27_SDR holdings	1995Q4	11.037	0.414	2.707	2.001	0.955
	1996Q4	10.312	0.344	2.642	1.907	0.981
	1997Q4	10.027	0.473	2.638	1.788	0.971
	1998Q4	10.603	0.468	2.663	1.868	1.107
	1999Q4	10.347	0.513	2.656	1.959	0.347
	2000Q4	10.539	0.326	2.437	1.763	0.402
	2001Q4	10.783	0.294	2.377	1.793	0.492
	2002Q4	12.166	0.363	2.524	1.98	0.622
	2003Q4	12.638	0.378	2.766	1.942	0.761

	2004Q4	13.628	0.328	2.839	2.061	0.875
	2005Q4	8.21	0.287	2.584	1.892	0.878
	2006Q4	8.87	0.396	2.812	2.01	0.948
	2007Q4	9.476	0.36	3.033	2.162	0.995
	2008Q3	9.418	0.469	3.048	2.214	0.977
	2009Q4	57.814	14.344	20.968	19.101	15.234
	2010Q4	56.824	14.118	20.626	18.769	15
	2011Q4	54.955	14.593	19.745	18.265	14.675
	2012Q4	55.05	14.786	19.91	17.908	14.586
	2013Q4	55.184	14.858	20.13	17.678	14.145
28_Portfolio investment assets	1995Q4	NA	NA	NA	NA	NA
	1996Q4	NA	NA	NA	NA	NA
	1997Q4	1740.344	972.023	906.662	NA	305.542
	1998Q4	NA	NA	NA	NA	NA
	1999Q4	NA	NA	NA	NA	NA
	2000Q4	NA	NA	NA	NA	NA
	2001Q4	2303.603	1304.044	1289.749	791.616	710.33
	2002Q4	2246.034	1360.38	1394.52	897.832	931.876
	2003Q4	3134.244	1670.204	1721.307	1205.127	1369.577
	2004Q4	3764.346	2109.701	2009.672	1515.477	1750.706
	2005Q4	4591.122	2373.924	2114.888	1552.803	1873.259
	2006Q4	5972.356	3140.509	2343.482	2266.371	2463.96
	2007Q4	7191.779	3393.411	2523.566	2624.809	2964.995
	2008Q3	NA	NA	NA	NA	NA
	2009Q4	5952.867	3035.788	2845.894	2507.866	2878.603
	2010Q4	6738.006	3241.109	3345.83	2555.686	2805.625
	2011Q4	6815.65	3209.577	3375.244	2380.35	2366.447
	2012Q4	7917.764	3551.807	3525.267	2760.141	2570.1
	2013Q4	NA	NA	NA	NA	NA
29_Cross-border deposits with BIS rep. banks	1995Q4	793.5	978.229	759.823	513.569	397.236
	1996Q4	895.439	1023.022	633.374	490.405	374.513
	1997Q4	1173.343	1224.217	725.351	463.17	359.932
	1998Q4	1163.49	1315.142	734.285	531.673	379.257
	1999Q4	1320.793	1252.029	571.117	469.014	357.235
	2000Q4	1506.843	1391.424	517.933	504.818	317.271

	2001Q4	1718.527	1457.85	445.19	549.145	370.662
	2002Q4	1940.156	1675.42	444.01	762.456	442.681
	2003Q4	2026.491	2012.532	406.591	1027.213	511.276
	2004Q4	2279.178	2439.004	465.759	1256.547	686.669
	2005Q4	2751.521	2863.396	436.83	1225.276	768.973
	2006Q4	3158.869	3631.619	463.978	1543.69	871.977
	2007Q4	3882.141	4751.796	673.927	1937.928	1141.834
	2008Q3	3900.266	4551.241	754.986	2011.593	1141.156
	2009Q4	3945.237	3933.598	479.067	1764.491	1080.02
	2010Q4	4393.43	4097.34	526.415	1601.495	1127.769
	2011Q4	4010.011	4068.143	659.069	1538.014	1286.855
	2012Q4	3650.246	3647.233	629.918	1486.847	1094.727
	2013Q4	3371.974	3430.678	647.604	1495.708	1113.141
30_Cross-border dep. with BIS banks, nonbanks	1995Q4	300.07	88.885	26.72	202.627	56.719
	1996Q4	352.606	99.257	36.58	186.731	60.939
	1997Q4	411.837	123.724	39.232	159.007	56.075
	1998Q4	462.242	124	52.459	170.02	57.303
	1999Q4	532.258	150.839	50.706	125.302	53.289
	2000Q4	611.861	174.403	55.03	124.97	51.093
	2001Q4	631.016	239.896	49.822	128.651	65.999
	2002Q4	793.973	294.202	58.737	148.504	74.138
	2003Q4	913.164	435.076	47.739	213.743	105.693
	2004Q4	1044.91	589.839	105.26	245.852	137.086
	2005Q4	1107.765	643.625	77.484	242.705	122.247
	2006Q4	1336.291	959.159	120.727	287.184	130.035
	2007Q4	1766.249	1105.773	141.148	324.206	171.103
	2008Q3	1866.751	1058.561	143.298	329.991	193.338
	2009Q4	1676.622	791.76	104.591	312.079	168.348
	2010Q4	1938.967	883.367	106.669	366.929	162.414
	2011Q4	1660.274	963.595	141.581	361.344	205.436
	2012Q4	1606.924	953.453	88.044	411.778	217.689
	2013Q4	1636.978	1040.694	99.02	422.655	209.541

Data from database: JEDH Databank (Last Updated: 05/06/2014)

5. Restructuring of Global Financial Regulatory System in the condition of Global Financial Integration : Pre Global Financial Crisis

SCHEME OF THE CHAPTER

1. Introduction

The financial system facilitates transaction from surplus fund holders to deficit fund holders. The global financial system framework and mechanism are similar to the national financial system. At the global level, principles of finance are similar, but only players and participants are different. This system also has characteristics of money market for short-term fund access and characteristics of a capital market for long-term fund access. The global financial system has both debt and equity instruments. Each system is governed and its functioning is based on ground rules and regulations and the same apply to the global financial system. However, in the GFRS there is no strict compliance and mandate as prevailing in the domestic regulation. “The Global Financial System (GFS) consists of the international monetary system with its official understandings, agreements, conventions, and institutions as well as the private and official processes, institutions, and conventions associated with private financial activities.”[1] Further, the GFS consists of the rules governing monetary authorities that manage treasuries, central banks, stabilization funds, and other country-specific institutions (Schinasi, 2006).[2] The global financial system has three components: private sector institutions, the nations that have supervisory jurisdiction over the private institutions, and the international institutions, through which the national authorities coordinate and cooperate. The GFRS is the collective governance arrangements at the global level for safeguarding the effective functioning (or the stability) of the global financial system.[3] The GFRS is governed first and foremost by the countries that have agreed to be part of it, for example, through their IMF membership, their participation in other institutions and agreements, and their adherence to various codes, standards, and understandings. Accordingly, accountability for the successes and failures of the GFRS rests squarely with its member countries, in particular, those that strongly influence it. These same countries are accountable to their own constituencies for the performance of

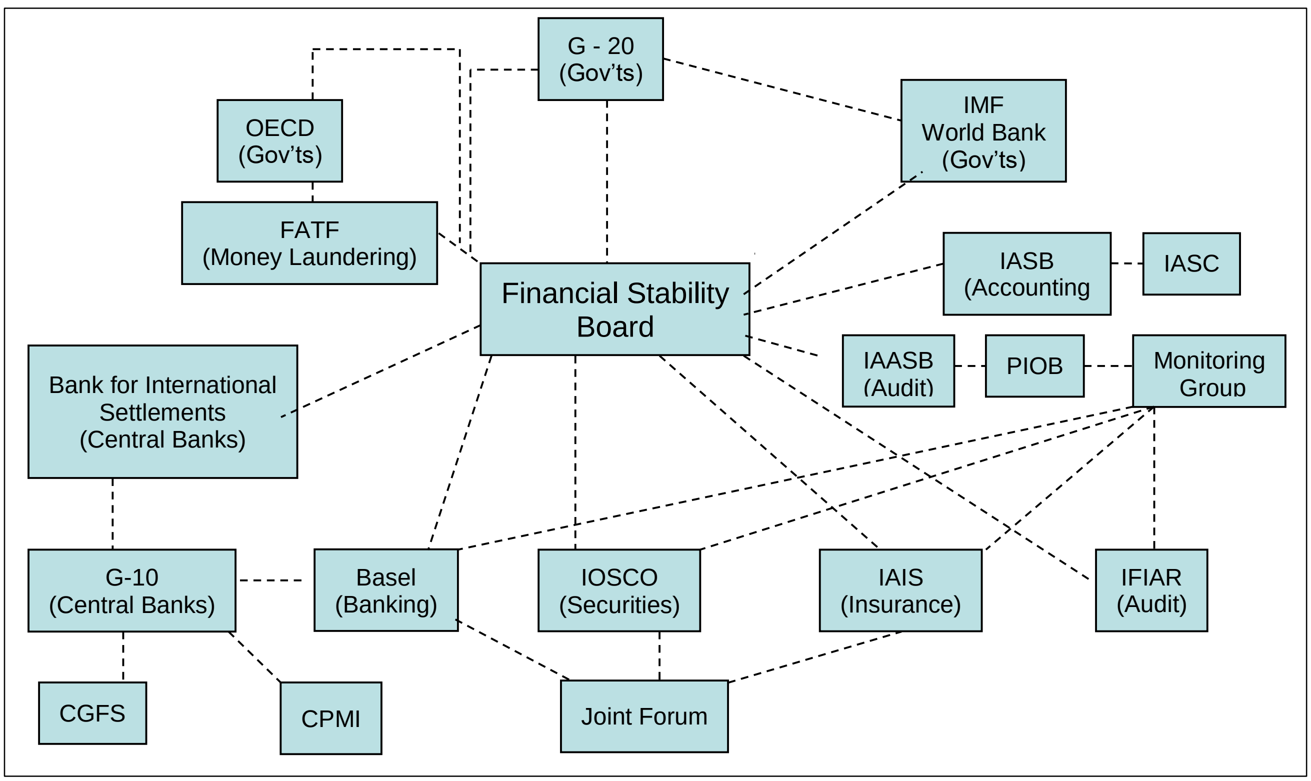
[1] Garry J. Schinasi and Edwin M. Truman, ‘Reform of the Global Financial Architecture’ [2010] Bruegel and the Peterson Institute for International Economics W P 10 - 14 , 3
<https://www.piie.com/publications/interstitial.cfm?ResearchID=1674> accessed 18-Mar-16.
[2] Garry J. Schinasi, *Safeguarding Financial Stability: Theory and Practice* (International Monetary Fund, 2006) 81.
[3] Anthony Elsona, ‘The Current Financial Crisis and Reform of the Global Financial Architecture’ [2010] The International Spectator: Italian Journal of International Affairs , 20.

the Global Financial Architecture and any implications its performance may have on national, regional, continental, and global economic and financial outcomes.

2. What is Global Financial Regulatory System (GFRS)?

GFRS consists of institutions, their participants, and financial regulators that act on a global level. The Financial Times lexicon defines it as: "..interplay of financial companies, regulators, and institutions operating on a supranational level. The global financial system can be divided into regulated entities (international banks and insurance companies), regulators, supervisors, and institutions".[4]

Figure I: Global Financial Regulatory System[5]



[4] 'Global Financial System Definition from Financial Times Lexicon' <http://lexicon.ft.com/Term?term=global-financial-system> accessed 23-May-16.
[5] The researcher modified some detail in the chart see, Sloan and Fitzpatrick, *Financial Market and Exchanges Law* (Oxford University Press 2007) in Ch 13, The Structure of International Market Regulation. Also see, Howard Davies and David Green, *Global financial regulation: The essential guide/ Howard Davies and David Green* (Polity 2008) in Ch 2, The Current International Regulatory System : Theory and Practice, 33.

The GFRS is the combination of Micro-Prudential Regulators' and Macro-Prudential Regulators', acting at Supranational level.

2.1. The relevant stakeholders of GFRS

Micro-Prudential Regulators in GFRS comprise of Standard Setting Bodies - SSBs (i.e., the Basel Committee on Banking Supervision, Committee on Payment and Settlement Systems, International Association of Insurance Supervisors, International Financial Reporting Standards, and International Organization of Securities Commissions, the Committee on the Global Financial System), International Financial Institutions (Bank for International Settlements (BIS); International Monetary Fund; Organization for Economic Cooperation and Development; and World Bank), Financial authorities of represented countries, the G-20 countries' regulatory and supervisory authorities (central banks, finance ministries or financial sector regulators), and the European Central Bank. On the other hand, Macro-Prudential Regulators in GFRS is represented by Financial Stability Board (FSB) and International Monetary Fund (IMF).

Micro-Prudential Regulation[6] examines the responses of an individual financial sector to exogenous risks. It does not incorporate endogenous risk, and it neglects the systemic implications of common behaviour,[7] whereas Macro-Prudential approach to regulation considers the systemic implications of the collective behaviour of financial sectors. A critical feature of macro-prudence and systemic stability is the heterogeneity of the financial system where homogenous behaviours are undermined by the system. In this regard, systemic risk is endogenous and Macro-Prudential Regulation is about identifying those endogenous processes that turn heterogeneity into homogeneity and make the financial system more fragile.[8] The health of individual financial institutions is a necessary

[6]Micro-Prudential Regulation consisting of such measures as the certification of those working in the financial sector; rules on what assets can be held by whom; how instruments are listed, traded, sold and reported; and measures of the value and riskiness of assets concerns itself with the stability of individual entities and the protection of clients of the institutions.
[7] The University of Warwick and CIGI, 'The Warwick Commission on International Financial Reform: In Praise of Unlevel Playing Fields' (The University of Warwick 2009). Ch 2 Macro-Prudential and Micro-Prudential Regulation, 12 <https://www2.warwick.ac.uk/research/warwickcommission/financialreform/report/> accessed 17 January 2016.
[8] Ibid.13.

condition for a sound financial system. However, it is not sufficient unto itself due to the complexity of the financial system and due to "fallacy of composition"[9] To achieve resilience and robustness within the financial system, the focus on individual institutions needs to be complemented by a system-wide perspective. In particular, Micro-Prudential Supervision should be supplemented with Macro-Prudential Supervision, aimed at increasing the resilience of the system as a whole, calming booms and softening busts, while mitigating systemic risks resulting from fallacies of composition, associated with concentration and interconnectedness in the financial system as a whole.[10]

The 'Macro-Prudential' dimension of financial regulation will have significant implications for the GFRS and will require more accountability and legitimacy in the international financial standard setting process.

[9] "Fallacy of composition" is the concept that the whole is not the simple sum of its parts and therefore what is true for an individual financial sector will hold true for the financial system as a whole. The outcome is that micro reasoning may lead to wrong conclusions at the macro level, even while that reasoning appears suitable for objectives at the micro level.

[10] 'Enhancing Financial Stability and Resilience: Macroprudential Policy, Tools, and Systems for the Future' (Sec I A Definition of Macroprudential Policy , The Group of Thirty 2010) 20 <http://www.group30.org/images/PDF/Macroprudential_Report_Final.pdf> accessed 17 January 2016.

Table A: Micro-prudential and Macro-prudential Policy Reactions in Financial Cycle[11]

Sr. No.	Part of the Cycle	Micro-Prudential Objective and Actions	Macro-prudential Objective and Actions
1.	**Boom** ▪ Strong credit and asset price growth, higher risks (but seems contained) and high returns, over optimism, and weakening underwriting standards. Expansive leveraging.	▪ No need to intervene (financial sector are highly profitable and can replenish capital and liquidity if needed). ▪ Intervention in underwriting standards to probe the more marginal and "frothy" deals would be very desirable.	▪ Address causes of systemic risk, correcting excessive imbalances and/or strengthen financial system resilience. ▪ Build up strong countercyclical capital and liquidity buffers.
2.	**Bust type-I (resulting in no crisis)** ▪ Slowdown in credit growth, stable or falling asset prices, lower returns, no confidence lost.	▪ Preserve stability of financial institutions. ▪ Stabilize (or increase selectively) capital and liquidity ratios; some restrictions on dividends, more scrutiny.	▪ Avoid serious deleveraging ▪ Release countercyclical capital and liquidity buffers built.
3.	**Bust type-II (resulting in crisis)** ▪ Deleveraging, substantial fall in asset prices due to fire sales, substantial financial loses, confidence lost.	▪ Regain confidence in institutions. ▪ Increase capital and liquidity ratios because the minimum was wrong compared to risk, extensive scrutiny, and possible forbearance.	▪ Regain confidence in the financial system and avoid deleveraging. ▪ Decrease capital and liquidity buffers if they are deemed enough or increase them if they are the source of the lack of confidence.
4.	**Recovery** ▪ Cautious re-leveraging, Moderate credit and asset price growth.	▪ Maintain capital and liquidity ratios rebuild during crisis or increase if needed.	▪ No need to intervene.

[11] Jacek Osiński, Katharine Seal, and Lex Hoogduin, 'Macroprudential and Microprudential Policies: Toward Cohabitation' [2013] IMF Staff Discussion Note, SDN 13/05, 26 <https://www.imf.org/external/pubs/ft/sdn/2013/sdn1305.pdf> accessed 18-Mar-16.

2.2. Jurisprudence of GFRS

The global standard setting bodies (BCBS, CGFS, CPMI, IOSCO, IADI, IAASB etc.) are not separate legal entities and their creation are not also subject to states enactment. They are an informal association of states representatives and professionals that address and identify problems concerning global financial integration. Further, the organization such as FSB has no official legal mandate; it simply serves as a board for discussion amongst national financial authority, international financial institutions, and other standard settings bodies. It leaves the discretion of national jurisdiction to comply with international norms with their respective national financial system. Though, these standards are non-binding in a legal sense but due to increasing efficiency in the financial sector and global market incentive, they are significantly important for financial sector enhancement. The validity of the global financial regulation is subject to the international legal norm where principles of legitimacy will always be challengeable in the regime of international financial soft law.

2.2.1. The International Economic Order in GFRS

The UN General Assembly (UNGA) Resolution 63/189[12] focused on the doctrine of democratic and equitable international economic order. The international economic order endorses the principles of universality, indivisibility, interrelatedness, interdependence and mutually reinforcing nature of all civil, cultural, economic, political and social rights, including the right to development.[13] Further, the UNGA Res. S-VI / 3201 declaration on the establishment of a new international economic order framed the principles for restructuring global financial governance.[14] New International Economic Order is the most

[12] United Nation General Assembly Resolution 63/189 (18 December 2008) UN Doc A/RES/63/189, ‘Promotion of a democratic and equitable international order’ <http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/63/189> accessed 18-Mar-16; See also, Kern Alexander and others, ‘The legitimacy of the G20 – a critique under international law’ [2014] , 6 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2431164> accessed 18-Mar-16.

[13] UNGA Res. 61/169 (19 December 2006) UN Doc A/RES/61/169, ‘The right to development’ <http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/61/169&Lang=E> accessed 21- Jan-16

[14] UNGA Res. S-6/3201 (1 May 1974) UN Doc A/RES/S-6/3201, Declaration on the Establishment of a New International Economic Order’ < http://www.un-documents.net/s6r3201.htm> accessed 21- Jan-16

important basis of economic relations between all peoples and all nations. The NIEO is framed based on the following important objectives[15]:

Figure II: NIEO Objectives[16]

The Resolution 3201 broadly focused on strong global economic interdependence and cooperation of all representative members to follow the principle of equality for sustaining

[15] UNGA Res. S-6/3201 (1 May 1974) UN Doc A/RES/S-6/3201, Declaration on the Establishment of a New International Economic Order' < http://www.un-documents.net/s6r3201.htm> accessed 21 January 2016;
Also see, Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' [2015] Preliminary draft, Rethinking Stakeholder Participation in Global Governance , 29 <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/activities/Alexander_Global_Financial_Governance_EarlyDraft.pdf> accessed 12-Feb-16.
[15] UNGA Res. S-6/3201 (1 May 1974)
[16] UNGA Res. S-6/3201 (1 May 1974) UN Doc A/RES/S-6/3201, Declaration on the Establishment of a New International Economic Order' < http://www.un-documents.net/s6r3201.htm> accessed 21 January 2016; Also see, Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' [2015] Preliminary draft, Rethinking Stakeholder Participation in Global Governance , 29 <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/activities/Alexander_Global_Financial_Governance_EarlyDraft.pdf> accessed 12-Feb-16.
[16] UNGA Res. S-6/3201 (1 May 1974)

long-term economic and political stability in the globe.[17] Thus, the political, economic and social well-being of present and future generations depends more than ever on co-operation between all the members of the international community, on the basis of sovereign equality and the removal of the disequilibrium that exists between them.[18]

2.3. Principles of Legitimacy in GFRS

The GFRS has developed rules and regulations to address continuous change in international finance. There is a persistent increase in representation of developing and LDCs in the decision-making structure of most international organizations, regardless of the huge structural gap between developed and developing economies.[19] The World Bank, IMF, and the WTO have established near universal regimes to synchronize and regulate financial, monetary and trade policies of their representative countries. Also regional associations[20] have been developed based on same principles.[21] There are fundamental principles of law and procedure that serve as reference points to assess the legitimacy of international institutions. The global financial regulation consists of substantive and principle norms with the fair decision-making process and ways of reaching opinions on controversial issues, thus, termed procedural legitimacy. Although the material legitimacy is equally necessary for the working of the legal and political system. The various international actors create and implement a range of international commitments, some of which are in legal form and others in non-binding instruments. The lack of a binding form may reduce the options for enforcement in the short term. However, this does not deny that

[17] UNGA Res. S-6/3201 (1 May 1974) UN Doc A/RES/S-6/3201, Declaration on the Establishment of a New International Economic Order' < http://www.un-documents.net/s6r3201.htm> accessed 21- Jan-16 (n 13)
[18] Ibid.
[19] Kern Alexander and others (n 12)
[20] African Union (AU), the Organization of American States (OAS), and the Association of Southeast Asian Nations (ASEAN), European Commission, SAARC.
[21] Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' Preliminary draft (Rethinking Stakeholder Participation in Global Governance Geneva, organised by Centre for Trade and Economic Integration (CTEI) at the Graduate Institute of International and Development Studies, Geneva 26-27 February 2015) 14. <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/activities/Alexander_Global_Financial_Governance_EarlyDraft.pdf> accessed 21 January 2016; See also , Ngaire Woods and Amrita Narlikar, 'Governance and the limits of accountability: the WTO, the IMF, and the World Bank' (2001) 53(170) International Social Science Journal , 573.

there can exist sincere and deeply held expectations of compliance with the norms contained in the non-binding form.[22]

The global financial regulation can be challenged based on the principle of legitimacy where the Macro-Prudential Regulation is not framed in accordance with generally accepted principles of right process. However, the decision-making of these regulations represents established values and approved procedures of multilateral collaboration. The international organizations such as the IMF, World Bank, WTO and some UN economic agencies, approach universal membership, but fail to incorporate generally accepted principles of legitimacy. International law mostly lacks centralized decision-making authority and enforcement procedures, but rather relies on universal adherence by states and decentralized compliance structures, material and procedural aspects of legitimacy. So, there is a trade-off between legitimacy and efficiency in decision-making.[23]

2.3.1. The rule of law in GFRS

The principles of rule of law are to be governed by a pre-existing system of substantive and procedural rules of all authoritative acts.[24] The government always acts within its powers, follows the appropriate procedures and provides equality of access to courts and other machinery for adjudication.[25] The legal system addresses the principles of good governance according to the law that includes openness, fairness, participation, accountability, consistency, rationality, accessibility of judicial and non-judicial grievance procedures, legality and impartiality.[26]

"[R]eaffirming also the need for universal adherence to and implementation of the rule of law at both the national and international levels and its solemn commitment to an international order based on the rule of law and international law, which, together with the

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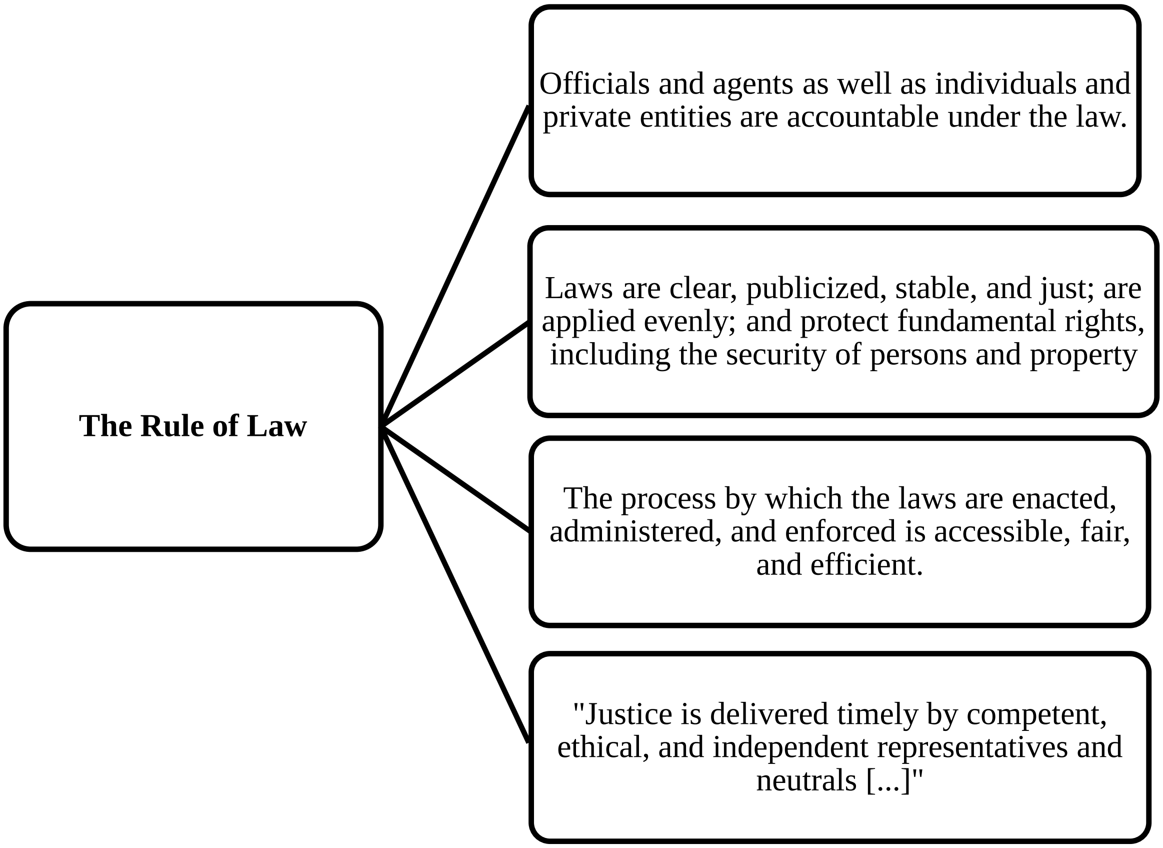
[22] Dinah L. Shelton, 'Soft Law: Handbook of International Law' [2008] Routledge Press, GWU Legal Studies Research Paper No 322 & GWU Law School Public Law Research Paper No 322 , 21 <http://ssrn.com/abstract=1003387> accessed 12-Feb-16.
[23] Kern Alexander and others (n 12) 8.
[24] Ibid. 8.
[25] Carol Harlow, 'Global Administrative Law: The Quest for Principles and Values' (2006) 17(1) European Journal of International Law , 195
[26] Mark Aronson and Matthew Groves, *Judicial review of administrative action* (3th ed. Thomson Reuters 2004) 1.

principles of justice, is essential for peaceful coexistence and cooperation among States (…).”[27]

Figure III: The rule of law contains four following universal principles[28]



The principles of democracy have become a general rule of law that legitimates the exercise of power and the maintenance of political order that applies across national borders as well as to international organizations and institutions of all kinds.[29] The good governance policies and practices, functioning at the supranational and international levels, exercise the decision-making power, being subject to the aforementioned principles of transparency

[27] UNGA Res. 68/116 (16 December 2013), The rule of law at the national and international levels
[28] ‘The rule of law define by World Justice Project’ <http://worldjusticeproject.org/what-rule-law> accessed 12-Feb-16.
[29] D Thürer, ‘A Common Law of Democracy? An Experimental Conceptualization’ (Universität Zürich) 77 <http://www.ivr.uzh.ch/institutsmitglieder/thuerer/forschung/FSMalinverni.pdf> accessed 12-Feb-16

and openness, accountability, participation, and responsiveness.[30] The adherence to this detailed criteria has become indispensable for determining the legitimacy of multilateral cooperation and decision-making.

2.3.2. The principles of Legitimacy in global financial Standard Settings Bodies (SSBs)

There are attributes of an international organization such as international personality, the capacity to conclude treaties or international legal immunities. The global financial standard setting bodies lack such characteristics. These SSBs (BCBS, CGFS, CPMI, IOSCO, IADI, IAASB etc.) are neither composed by states nor founded upon an international treaty; they are not functioning based on traditional legal definitions of an international organization. There are issues of transparency and accountability associated with these bodies. This undermines the effectiveness and legitimacy of these SSBs. Though they are excluded in the potential discipline of international law, they have enhanced their presence by adopting the coordinating and consulting method to implement sound financial practices in member's states. In this regard, Basel Committee on Banking Supervision (BCBS) addresses specific issues of concern to bank regulators. They follow the due procedure of deliberation and issue recommendations to the secretary general of the Basel Committee and deputy secretary general. This decision-making mechanism is followed through consensus basis. However, the committee's recommendations are legally nonbinding in an international law sense[31] and place a great deal of emphases on decentralized implementation and informal surveillance mechanism of member compliance. The BCBS does not possess any formal supranational authority. Its decisions do not have legal force. Rather, the BCBS relies on its members' commitments, as described in Section 5,[32] to achieve its mandate (BCBS Charter, Section 3). This applies to other SSBs in their operation, in the context of international soft law.

[30] Kern Alexander (2015) 17.

[31] 'Basel Committee on Banking Supervision (BCBS) Charter', Section 3 (January 2013) <http://www.bis.org/bcbs/charter.pdf> accessed 12-Feb-16.

[32] BCBS members are committed to: work together to achieve the mandate of the BCBS; promote financial stability; continuously enhance their quality of banking regulation and supervision; actively contribute to the development of BCBS standards, guidelines and sound practices; implement and apply BCBS standards in

3. Role and Structure of GFRS: Pre Global Financial Crisis

3.1 The role of United Nations Monetary and Financial Conference (Bretton Woods) in GFRS

Before Bretton Wood, the Bank for International Settlement (BIS) was the world's oldest international financial institution formed under the Hague Agreements of 1930.[33] It was established in the context of the Young Plan[34], which dealt with the issue of the reparation payments imposed on Germany by the Treaty of Versailles[35] following the First World War. The BIS served as the payment agent for the European Payments Union (EPU, 1950-58), which facilitated the restoration of currency convertibility for the western European countries following the Second World War.[36] Roosevelt and Churchill in 1941, by means of Atlantic Charter, set out a very broad aspiration for all worlds' people by comparing the United States Constitution and British Magna Carta. The main goal of Atlantic Charter was, "All people have the right to choose the form of government under which they will live and bring the fullest collaboration between all nations in the economic field with the object of securing for all (The Atlantic Charter, Section 3 and 6)."[37] Assurance that all men in all the land may live out their lives in freedom from fear and want**.** The basic rationale

their domestic jurisdictions[2] within the pre-defined timeframe established by the Committee; undergo and participate in BCBS reviews to assess the consistency and effectiveness of domestic rules and supervisory practices in relation to BCBS standards; and promote the interests of global financial stability and not solely national interests, while participating in BCBS work and decision-making.

[33] 'Convention respecting the Bank for International Settlements' (20 January 1930) <https://www.bis.org/about/convention-en.pdf> accessed 12-Feb-16.

[34] Encyclopaedia Britannica, 'School and Library Subscribers' <http://www.britannica.com/event/Young-Plan> accessed 12-Feb-16; Young Plan, (1929), second renegotiation of Germany's World War I reparation payments. A new committee, chaired by the American Owen D. Young, met in Paris It reduced the amount due from Germany to 121,000,000,000 Reichsmarks in 59 annuities, set up the Bank for International Settlements to handle the transfer of funds, and ended foreign controls on German economic life. However, hardly had the Young Plan started operation than the world depression of the 1930s began, and Germany's ability to pay dwindled to the vanishing point.

[35] World War I officially ended with the signing of the Treaty of Versailles on June 28, 1919.

[36] Bob Reinalda, *Routledge History of International Organizations: From 1815 to the Present Day* (Routledge, 2009)

[37] 'Articles of Agreement IMF and IBRD' (United Nations Monetary and Financial Conference 1944). Article I Purpose, 51-52. <http://siteresources.worldbank.org/EXTARCHIVES/Resources/IBRD_Articles_of_Agreement.pdf> accessed 12-Feb-16.

behind this was to promote post-war political-economical stability, domestically and globally.

After the end of the Second World War the world was looking for a strong GFRS for long-term stability and prosperity. The allied powers held the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire on July 22, 1944. The objective was to build up an effective post-war Global Financial Regulatory System (Article I: Purpose, Articles of Agreement IMF and IBRD).[38]

3.1.1. The Role of IMF in GFRS

The United Nations Monetary and Financial Conference became prominent in the name of Bretton Woods Conference. The architects of Bretton Woods depict a lesson from the Great Depression of the early 1930s. The global financial system had been more internationally integrated with the world where integrated countries' governments had played an important role in Bretton Woods's negotiations in 1944. In the first stage of restructuring in GFRS, the British Economist, John Maynard Keynes and American counterpart, Harry Dexter White pioneered the restructured blueprints.[39] The member countries agreed to make their currencies convertible for current account transactions under the Articles of Agreement of the newly created International Monetary Fund (IMF), where the following rights were given to them "*Members may exercise such controls as are necessary to regulate international capital movements, but no member may exercise these controls in a manner which will restrict payments for current transactions*" (Article VI, Section 3).[40] The fundamental theory adopted by both Keynes and White was based on the fixed exchange rate system. The GFRS developers felt that it was important to return to a system of money flowing on the basis of a fixed relationship to gold, rather than on the basis of fiat money.[41] Global exchange market disequilibrium was corrected by market forces under the gold

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[38] Ibid.

[39] J. Keith Horsefield, *The International Monetary Fund 1945-1965; Twenty Years of International Monetary Cooperation* (Volume I: Chronicle, International Monetary Fund, 1969) Ch 1 The Keynes and White Plans (1941-42), 3-25 <http://www.elibrary.imf.org/staticfiles/IMF_History/IMF_45-65_vol1.pdf> accessed 22 January 2016.

[40] 'Articles of Agreement of the International Monetary Fund' (Capital Transfer). Article VI Sec 3, 20; This article has not been change since inception of IMF.

[41] N Gregory Mankiw, *Macroeconomics* (8th edn, Worth Publishers 2013) 84.

standard. The mechanism was termed as the "gold exchange standard" or "gold dollar standard" where the member nations fix their currencies value to the dollar, which, in turn was convertible into gold.[42] The countries were given the flexibility to adjust the par value of their currency whenever their country faced disequilibrium in "Balance of Payment".[43] The IMF was promoting global monetary and financial cooperation among governments as a Marco-Prudential Regulator. The capital movements were to be restricted through domestic national control, with the IMF supporting the system through monitoring of capital flows and facilitating orderly exchange readjustments.

The IMF was founded to promote international monetary cooperation, to foster economic growth and high levels of employment, exchange stability, to avoid competitive exchange depreciation, and to provide temporary financial assistance to countries help ease balance of payments adjustment (Article I, Article of Agreement of the IMF).[44] This is a reasonable summary of the aims embedded in the IMF founding treaty, the IMF Articles of Agreement. Since the IMF was established, its purpose has remained unchanged as reflected in Article I of the IMF Charter.[45]

The scarce currency clause of the IMF was drafted with a view to see that when there is scarcity in stock of country A's currency and if IMF ran out of stocks of country A's currency, this could be announced as 'scarce currency,' upon which members would be

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[42] Eric Helleiner, *States and the Reemergence of Global Finance: : From Bretton Woods to the 1990s* (Cornell University Press 1994) 49.

[43] 'Articles of Agreement of IMF' (22 July 1944). Article IV Sec 5 (a) -Changes in par values due to fundamental disequilibrium.

[44] IMF Articles of Agreement, Article I (The purposes of the IMF are: (i) To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems. (ii) To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy. (iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation. (iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade. (v) To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity. (vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.)

[45] 'Articles of Agreement of IMF' (22 July 1944). Article I - The purposes of the IMF (amended effective March 3, 2011)

entitled and expected to discriminate against the country's goods in their trade policies. Keynes believed that this would enable discipline for both deficit and surplus nations.[46] The scarce currency clause of Article VII[47] empowers the IMF to identify and declare a currency as a scarce currency.[48] The essence of this clause has been ignored, and the IMF has consistently placed the adjustment burden on countries that run trade deficits except for the US, which is the source of the international reserve currency.[49] Keynes had been a strong advocate of the idea of a central bank for the world, an "International Clearing Union"[50] that could issue a new unit to be called the "bancor[51], bezant, dolphin, unitas , daric and heavens knows what".[52] The Keynesian economists argued that the replenishment and scarce currencies problem might not take place in Keynes' proposed ICU model.

The exchange rates system functioned well from 1945 until 1969.[53] The GFRS faced the problem of inadequate supply of key reserve assets, gold and U.S. dollar due to increase in global trade and financial flow. The Special Drawing Right (SDR) was created by the IMF in 1969 as a supplementary international reserve asset, in the context of the Bretton Woods fixed exchange rate system. A few years after the creation of the SDR,[54] the Bretton Woods system collapsed. President Nixon announced to the world that the United States was "closing the gold window"[55] abandoned the fixed link between the US dollar and gold in a move known as the Nixon Shock.[56] On 15 August 1971,[57] the exchange rate regime collapsed, the GFRS was confronted with extreme volatility in the foreign exchange

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[46] John Braithwaite and Peter Drahos, 'Bretton Woods: Birth and Breakdown' [2001] Global Business Regulation , Fathom, Global Policy Forum , 97.
[47] 'Article of Agreement of IMF' (2011). Article VII Replenishment and Scarce Currencies
[48] Ross P. Buckley and Douglas W. Arner, *From Crisis to Crisis: The Global Financial System and Regulatory Failure* (Kluwer Law International 2011) Ch 1 History of the Global Financial System, 7
[49] Ibid.
[50] J. Keith Horsefield (n 34) 3.1
[51] Ibid.18.
[52] John Braithwaite and Peter Drahos, *Global Business Regulation* (Cambridge University Press 2000) 100
[53] Rolf H. Weber and Douglas W. Arner, 'Toward a New Design for International Financial Regulation' (2007) 29(2) Journal of International Law ,397.
[54] 'First Amendment to the IMF Articles of Agreement in Article XV' (the Board of Governors Resolution No. 23-5, adopted 28 July 1969). established a facility of SDR.
[55] Douglas A. Irwin, 'The Nixon shock after forty years: the import surcharge revisited' (2013) 12(1) World Trade Review, 29.
[56] Ibid. 29.
[57] Ibid. 29.

markets and imbalances caused by 'petro dollar' flow from oil producing countries following the Arab oil embargo. IMF had lost its trust after the departure from the gold standard. The Fund nonetheless continued to maintain a certain role in the process of exchange rate adjustment.

On the basis of adoption of second amendment to the IMF Articles of Agreement, 'the IMF shall oversee the international monetary system in order to ensure its effective operation'(*Article IV: Obligations Regarding Exchange Arrangements, Sec 2 & Sec 4*).[58] It allowed the IMF to support economies dealing with periodic exchange crises. However, such financial support was based on 'conditionality.'[59] This shifted the focus of IMF from monetary affairs to structural adjustment. "The value of the SDR was initially defined as equivalent to 0.888671 grams of fine gold which, at the time, was also equivalent to one U.S. dollar. After the collapse of the Bretton Woods system in 1973, the SDR was redefined as a basket of currencies. Currently, the SDR basket consists of the U.S. dollar, euro, Japanese yen, and pound sterling. The basket of the club of currencies will be extended to the Chinese renminbi effective from October 1, 2016".[60]

The macroeconomic regulators started with a search for an alternative to the Fund. Since the IMF ability to harmonize macroeconomic policies was weakened, it was not an important negotiator in either the Plaza agreement (1985)[61] or the Louvre accord (1987),[62] though both were very important agreements[63] and examples of policy cooperation and

[58] 'The Second Amendment to the IMF Articles of Agreement in Article IV 1976' (the Board of Governors in Resolution No. 31–4, adopted 30 April 1976) established the rights to adopt exchange rate arrangements of their choice.
[59] Jeffrey D. Sachs, 'Conditionality, Debt Relief, and the Developing Country Debt Crisis' in Jeffrey D. Sachs (ed), *Developing Country Debt and Economic Performance, Volume 1: The International Financial System* (University of Chicago Press 1989) 264.
[60] IMF, 'Factsheet -Special Drawing Right' (30 November 2015) <https://www.imf.org/external/np/exr/facts/sdr.HTM> accessed 12-Feb-16.
[61] The Plaza Accord meant for depreciating the US dollar in relation to the G-7 currency where G-7 nation will intervene in currency markets.
[62] The Louvre Accord meant for stabilize the international currency market where US dollar was continued decline due e to Plaza Accord. The G-7 countries agree to reduce fiscal deficit, government spending and maintain low interest rates.
[63] The Plaza Accord and the Louvre Accord were focusing on the coordination of macroeconomic fiscal and monetary policy for all nations.

coordination among the developed countries.[64] There was a need for policy coordination institution, and this sowed the seed and created the opportunity for FSF and current FSB to take birth.

In the early 1990s, the Fund staff met regularly with financial authorities of each member country to review economic policies and developments. These consultations are required under Article IV of the IMF Articles of Agreement. The Fund examines members' fiscal-monetary policies performance, the balance of payments situation, and to assess the impact of policies, including exchange and trade restrictions on members' exchange rates and external accounts. The substance of Article IV consultations depends on the characteristics of the member country and the prevailing external economic environment. Increasing attention has been devoted to determining whether a country's balance of payments position can be sustained over the medium term and to ways that structural policies can enhance economic performance and financial stability. This was described as Structural Adjustment[65] in IMF Annual report 1990 which stated that member nations should take necessary step towards improving efficiency including major tax, financial reforms, privatization and measures to enhance the flexibility of labour markets. The Article IV formalizes its role in encouraging and supporting capital liberalization, especially in developing, emerging and transition economies.[66] By 1994, the 50th anniversary of the Bretton Woods Conference, the IMF largely understood its role and the mechanisms through which to achieve its goals as being centred on the policy-focused ideas of the 'Washington Consensus.'[67]

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[64] Robert Carbaugh, *International Economics* (15th edn, Cengage Learning 2014) Ch 16 Macroeconomic Policy in an Open Economy, 491; Also see, Sara Hsu, *Financial Crises, 1929 to the Present* (Edward Elgar Publishing 2013) 142.

[65] 1990 International Monetary Fund, 'Annual report of the executive board for the financial year ended April 30, 1990' (1990). 13(Box 3) ; See also, Martin Griffiths, *Encyclopedia of International Relations and Global Politics* (Routledge 2013) 112.

[66] 1990 International Monetary Fund (n 60) 13 & 30; See also, 'IMF Articles of Agreement Amendment' (the Board of Governors Resolution 45-3, adopted 28 June 1990). Compulsory withdrawal from Membership, Article XXVI, Sec 2.

[67] Trade liberalization, privatisation, Fiscal discipline (fiscal deficit around 3 % of GDP), interest rate market determined, tax reform, Protection of property right, market determined exchange rate. It primarily focuses on privatization, liberalization and macro stability; see also, Narcís Serra, Shari Spiegel, and Joseph E. Stiglitz, 'Introduction : Form the Washington Consensus Towards a New Global Governance' in Narcís Serra and Joseph E. Stiglitz (ed), *The Washington Consensus Reconsidered: Towards a New Global Governance* (OUP Oxford 2008) 1

- **Interface of IMF with World Bank**

The IMF improved both in the provision of international liquidity and in encouraging transparency. The IMF approved the supplemental reserve facility and a general capital increase in case of requirement of additional liquidity. The IMF expanded the mandate of capital account liberalization. The focus of the "World Bank was like construction agencies while the IMF has functioned more like a fire brigade".[68] The World Bank focus is structural and sectoral, as compared with the IMF's conventional focus on macroeconomic aggregates. The World Bank focus is on long-term restructuring while the IMF focuses on short-term adjustment. The World Bank focus is solely on broad area of development issues (the main goal of poverty alleviation), while in practice the IMF remains focused on macro-economic and financial issues.[69] The International Monetary and Financial Committee (IMFC) is a bridge between IMF and World Bank for continuous interaction and coordination between the two institutions.

The International Monetary and Financial Committee (IMFC)[70] advises and reports to the IMF Board of Governors on the supervision and management of global financial regulatory mechanism issues. It also considers proposals by the Executive Board to amend the Articles of Agreement and advises on any other matters that may be referred to it by the Board of Governors. Though the IMFC has no formal decision-making powers, in practice, it has become a key instrument for providing strategic direction to the work and policies of the Fund. Development Committee[71] is the joint ministerial committee of the Boards of Governors of the bank and fund on the transfer of real resources to Developing Countries. It advises the Boards of Governors of the IMF and World Bank on critical development issues and on the financial resources required to promote economic development in

[68] Douglas W Arner and Ross P Buckley, 'Redesigning the Architecture of the Global Financial System' (2010) 11(2) Melbourne Journal of International Law , 16 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1758470> accessed 12-Feb-16.

[69] Ibid. 16.

[70] IMF Factsheet, 'A Guide To Committees, Groups, and Clubs' <http://www.imf.org/external/np/exr/facts/groups.htm> accessed 12-Feb-16.

[71] Ibid.

developing countries. The International Monetary and Financial Committee[72] and the Development Committee coordinate activities between IMF and IBRD.[73]

- **Financial Sector Assessment Program (FSAP)[74]**

The Financial Sector Assessment Program (FSAP), established in 1999, is a comprehensive and thorough assessment of a country's financial sector. FSAP analyses the resilience of the financial sector, the quality of the regulatory and supervisory framework, and the capacity to manage and resolve financial crises. Based on its findings, FSAP produces recommendations of a micro plus Macro-Prudential[75] nature, customized to country-specific circumstances. This evaluation assesses the effectiveness of the FSAP from the perspective of the IMF. A parallel evaluation by the World Bank's Operations Evaluation Department (OED) assesses the World Bank's role. Although a voluntary program, it has become the principal platform for financial sector diagnosis at the IMF. It is a joint IMF-World Bank exercise, but with different outputs for different purposes, including a confidential report to the authorities and separate summary reports to the Boards of the IMF (the Financial System Stability Assessment (FSSA)) and the World Bank (Financial Sector Assessment (FSA)), dealing with issues that are in their respective areas of responsibility. The goal of FSAP assessments is twofold: first, to estimate the stability of the financial sector and second, to assess its potential contribution to growth and development. It was introduced to fill an identified gap in the global financial regulatory system, based on a judgment that existing surveillance approaches at the IMF under Article IV, Sec 3 (b)[76] consultations were not sufficient for effective financial sector

[72] Ibid.
[73] Sarah Tenney and Anne C. Salda, *Historical Dictionary of the World Bank: Historical Dictionaries of International Organizations* (Scarecrow Press 2013) 86-87; See also, Paul Cammack, 'The Governace of Global Capitalism : A New Materialist Perspective' in Rorden Wilkinson (ed), *The Global Governance Reader* (Psychology Press 2005) 164.
[74] IMF, 'Financial Sector Assessment Program (FSAP)' (24 September 2014) <https://www.imf.org/external/np/fsap/fssa.aspx> accessed 12-Feb-16; See also, Erin Waldron, 'Averting the next financial crisis; Improving International Monetary Fund Surveillance' [2006] American for Democratic Action Education Fund, 23 <http://www.adaction.org/media/ErinIMF.Final.pdf> accessed 12-Feb-16 .
[75] Richard K. Gordon, 'The International Monetary Fund and the Regulation of Offshore centers' in Andrew P. Morriss (ed), *Offshore Financial Centers and Regulatory Competition* (Government Institutes 2010) 83.
[76] Members shall adopt specific principles for the guidance. Each member shall provide the Fund with the information necessary for such surveillance, and, when requested by the Fund, shall consult with the member's (...).

surveillance. However, the core features of FSAP have remained unchanged, i.e., of voluntary participation, a joint IMF-World Bank exercise, differential outputs for different purposes.[77]

The FSAP is a key instrument of the Fund's surveillance and provides input to the Article IV consultation. In jurisdictions, with financial sectors deemed by the Fund to be systemically important, financial stability assessments under the FSAP are a mandatory part of Article IV surveillance, and are supposed to take place every five years for all other jurisdictions. Participation in the program is voluntary. In developing and emerging market countries, FSAPs are conducted jointly with the World Bank. In these countries, FSAP assessments include two components: a financial stability assessment, which is the responsibility of the Fund, and a financial development assessment, which is the responsibility of the World Bank.

At the end of each FSAP mission, teams leave a detailed and comprehensive *Aide Memoire* with national authorities, which is confidential. FSAP concludes with the preparation of a Financial System Stability Assessment (FSSA), which focuses on issues of relevance to IMF surveillance and is discussed at the IMF Executive Board together with the country's Article IV report. Publication of FSSA is not mandatory.

The FSAP was conceived as a diagnostic and policy advice tool. It was designed to work at two levels: confidential advice to country authorities and peer review. The peer review element works through the regular Article IV process, with the FSSA report as part of the Article IV documentation distributed to the IMF Board. However, the precise legal position of the FSAP within this framework is a nuanced one. Strictly speaking, the FSAP is a form of technical assistance from the Fund and is not by itself an exercise of surveillance under Article IV. Rather, the FSAP "feeds into" surveillance through the FSSAs (i.e., provides material which deepens the understanding of the member's circumstances for the purpose of surveillance).[78]

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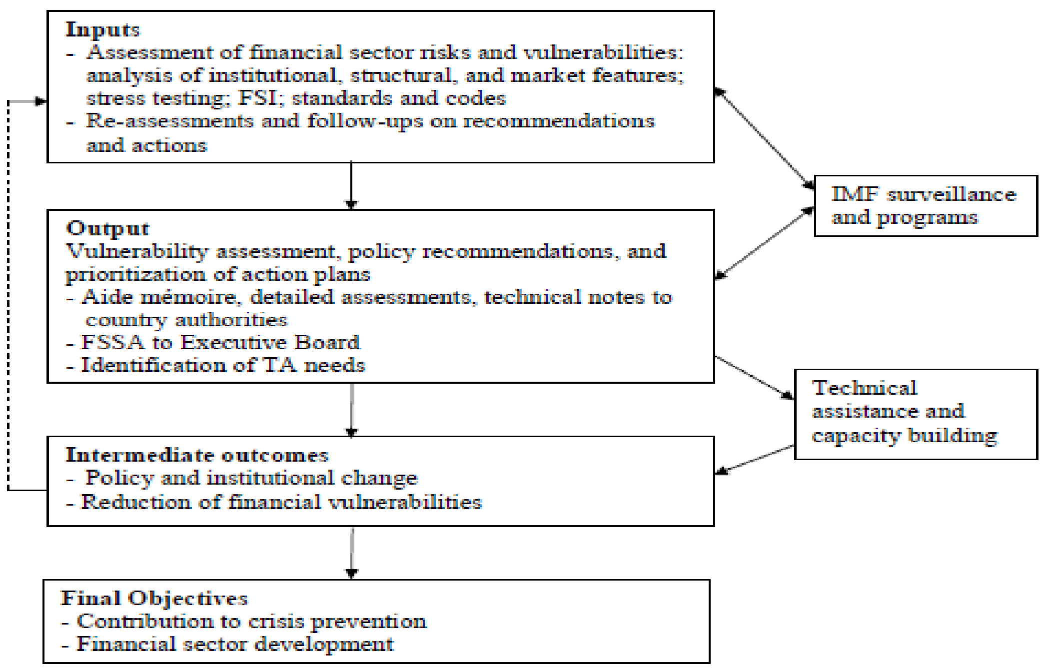
[77] International Monetary Fund - Independent Evaluation Office, 'IEO Report on the Evaluation of the Financial Sector Assessment Program' (2006) 7.

[78] Activities that fall outside preview of Article IV may still inform an Article IV consultation. A FSSA under the FSAP is a technical service provided by the Fund to a member at its request under Article V, Section

FSAP widened the scope of its peer review in a regional and global dimension where cross-border activities in the financial sector can highlight and work on potential spillover effects.[79] The FSAP comprehensively applies instruments stress test of banking, capital market, insurance or whole financial system with interplay connection in macroeconomics trends, policies and interlinkage with other economics sectors. This procedure works in accordance with the principle of global financial integration. They identify vulnerabilities and risk, and at the end of the process they suggest prospective policy choice to stabilize the financial system in macroeconomic context.[80] The following figures describes the detailed procedure of FSAP peer review process.

Figure IV.A: The FSAP's coherent Framework[81]



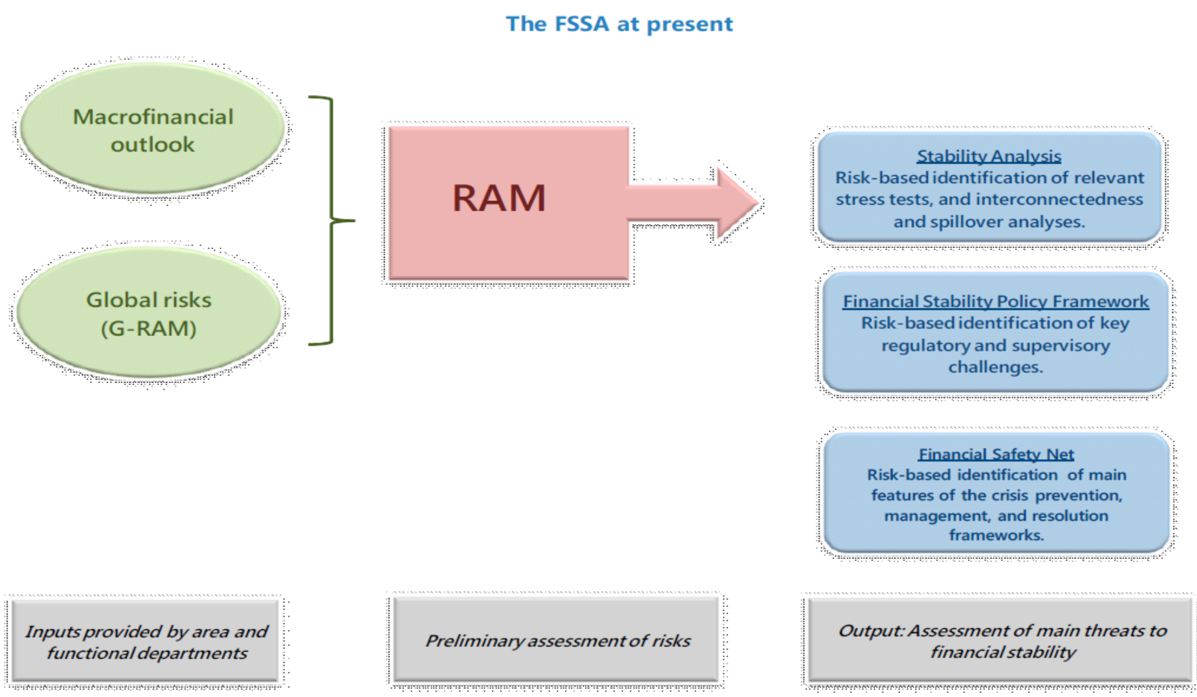
2(b). However, the information obtained through the FSAP can be used for the purposes of informing discussions under an Article IV consultation. Many of the issues that are discussed in a FSSA do fall within the scope of surveillance under Article IV; in the absence of a FSSA, the issues that are normally discussed in such an assessment could be discussed by the Fund as part of surveillance.

[79]IEO Report (n 77) 21; Part of the work on regional FSAP exercises, especially for cases involving currency unions. It has been conducted for the Eastern Caribbean Currency Union countries, African and European countries.

[80] IEO Report (n 77) 21.

[81] International Monetary Fund and Independent Evaluation Office, 'Report on the Evaluation of the Financial Sector Assessment Program' (5 January 2006) 72 <https://www.imf.org/external/np/ieo/2006/fsap/eng/pdf/report.pdf> accessed 12-Feb-16.

Figure IV.B: The New FSSA: Macrofinancial and Systemic Risk Focus[82]



- **Reports on the Observance of Standards and Codes (ROSCs)**[83]

The standards and codes initiative was launched in 1999 by the Fund and the Bank as a prominent component of efforts to strengthen the global financial regulatory system[84] in the backdrop of the emerging market crises of the 1990s. The initiative was designed to promote greater financial stability at both the domestic and international levels through the development, dissemination, and adoption of international standards and codes. The initiative covers twelve areas and associated standards, which the Bank and Fund Boards have recognized as useful for their operational work. These areas relate to: (i) policy transparency (for which the Fund is primarily responsible); (ii) financial sector regulation

[82] International Monetary Fund, 'Review of the Financial Sector Assessment Program: Further Adaptation to the Post Crisis Era' (2014) 44 <http://www.imf.org/external/np/pp/eng/2014/081814.pdf> accessed 12-Feb-16.

[83] The World Bank Group, 'Reports of the Observance of Standards and Codes' <http://www.worldbank.org/ifa/rosc.html> accessed 12-Feb-16; also see, International Monetary Fund, 'Reports on the Observance of Standards and Codes (ROSCs)' (20 January 2016) <http://www.imf.org/external/NP/rosc/rosc.aspx> accessed 12-Feb-16.

[84] Eric Helleiner, 'The Financial Stability Board and International Standards' [2010] The Centre for International Governance Innovation (CIGI) G20 Papers No 1 , 8.

and supervision (assessed by the Bank and Fund mainly as part of their joint Financial Sector Assessment Program, FSAP); and (iii) market integrity (assessed by the Bank).

Box 1. Standards and Codes Relevant for Bank and Fund Work[85]

Policy Transparency

- Data Transparency: the Fund's Special Data Dissemination Standard and General Data Dissemination System (SDDS and GDDS).
- Fiscal Transparency: the Fund's Code of Good Practices on Fiscal Transparency.
- Monetary and Financial Policy Transparency: the Fund's Code of Good Practices on Transparency in Monetary and Financial Policies (MFPT), (usually assessed under the FSAP);

Financial Sector Regulation and Supervision

- Banking Supervision: Basel Committee on Banking Supervision's (BCBS) Core Principles for Effective Banking Supervision (BCP).
- Securities: International Organization of Securities Commission's (IOSCO) Objectives and Principles for Securities Regulation.
- Insurance: International Association of Insurance Supervisors' (IAIS) Insurance Supervisory Principles (ISP).
- Payments Systems: Committee on Payments and Settlements Systems' (CPSS) Insurance Supervisory Principles, complemented by Recommendations for Securities Settlement Systems (RSSS) for countries with significant securities trading.
- Anti-money Laundering and Combating the Financing of Terrorism: Financial Action Task Force (FATF)'s 40+9 Recommendations.

[85] International Monetary Fund and the World Bank, 'The Standards and Codes Initiative- Is It Effective? And How Can It Be Improved?' (Approved by Mark Allen and Danny M. Leipziger, 1 July 2005) <http://www.worldbank.org/ifa/ROSC%20review%202005.pdf> accessed 12-Feb-16

Market Integrity

- Corporate Governance (CG): Organization for Economic Cooperation and Development's (OECD) Principles of Corporate Governance.
- Accounting: International Accounting Standards Board's (IASB) for International Accounting Standards.
- Auditing: International Federation of Accountants' International Standards on Auditing (ISA).
- Insolvency and Creditor Rights (ICR): A standard based on the Bank's Principles for Effective Insolvency and Creditor Rights Systems and the United Nations Commission on International Trade Law (UNCITRAL) Legislative Guide on Insolvency Law.

The IMF has invited the World Bank to embark on a joint pilot exercise preparing "*Reports on the Observance of Standards and Codes*" (ROSCs). They are undertaking a large number of summary assessments of the observance of selected standards relevant to private and financial sector development and stability. These assessments are being collected as "modules" in country binders constituting the *ROSCs*. Under this modular approach, the Fund takes the lead in preparing modules in the area of data dissemination and fiscal transparency. Modules for the financial sector (monetary and financial policy transparency, banking supervision, securities market regulation, payment systems, and deposit insurance) are mostly derived as by-products from a parallel Bank-Fund Financial Sector Assessment Program (FSAP). The World Bank has been asked to take the lead in three areas covered by ROSCs: (i) corporate governance, (ii) accounting and auditing, and (iii) insolvency regimes and creditor rights. The standard setters are the World Bank, the IMF, and nine other organizations: the BCBS, IOSCO, IAIS, the CPSS, FATF, the OECD, IASB, IFAC (IAASB), and UNCITRAL. FATF and the FATF-Style Regional Bodies (FSRBs) are the only other organizations producing ROSCs, and solely in the area of anti-money laundering and combating the financing of terrorism.[86]

The *Reports on the Observance of Standards and Codes—Accounting and Auditing* (ROSC AA)[87] are part of the joint World Bank and International Monetary Fund Initiative on Standards and Codes that helps member countries strengthen their financial systems by improving compliance with internationally recognized standards and codes, and provides policy recommendations for building countries accounting and auditing capacity. The ROSC AAs focus on the adoption and implementation of International Financial Reporting Standards (IFRSs) and International Standards on Auditing (ISA), as well as the legal, regulatory, and capacity factors that have an impact on effective implementation and associated practices. The review provides input to the country's plans for capacity building and assists policymakers in supporting the development of the corporate sector and investors in assessing the reliability and transparency of corporate financial reporting.[88] The objectives[89] of this program are to analyse comparability of national accounting and auditing standards with international standards, determine the degree with which applicable accounting and auditing standards comply, and assess strengths and weaknesses of the institutional framework for supporting high-quality financial reporting. It also assists the country in developing and implementing a country action plan for improving institutional capacity to (or "intending to") strengthen the country's corporate financial reporting regime.

[86] International Monetary Fund, 'Reports on the Observance of Standards and Codes (ROSCs)' (21 September 2015) <http://www.imf.org/external/NP/rosc/rosc.aspx> accessed 12-Feb-16.
[87] The World Bank Reports on the Observance of Standards and Codes (ROSC), 'Overview of the ROSC Accounting and Auditing Program' (World Bank, January 2004) 2 <http://www.worldbank.org/ifa/rosc_aa_overview.pdf> accessed 12-Feb-16.
[88] John Hegarty, Frédéric Gielen, and Ana Cristina Hirata Barros, 'Lessons Learned from the World Bank's Accounting and Auditing ROSC Program' (The Conference on Challenges associated with the Implementation of International Accounting & Auditing Standards, Financial Stability Forum in Basel, Switzerland, 15 October 2004) <http://www.worldbank.org/ifa/LessonsLearned_ROSC_AA.pdf> accessed 12-Feb-16.
[89] The World Bank Group (n 78)

3.1.2. The Role of IBRD (World Bank) in GFRS

The United Nations Monetary and Financial Conference planners understood the need for a medium for post-second world war reconstructing and development. The bilateral efforts of the US through the 'Marshall Plan'[90] and related reconstruction initiatives undertaken by the European Community through its aid programs were focused towards Southern and Eastern European countries. This resulted in the International Bank for Reconstruction and Development (IBRD) in 1944. Its broad purpose is for *Reconstruction and Development* (Article I, IBRD Articles of Agreement).[91] The current mandate of IBRD is to alleviate poverty[92] in close coordination with IBRD affiliates or members.[93] The important task of a decrease in poverty worldwide has become complementary to UN's Millennium Development Goals.[94] World Bank[95] also assists countries during market failure. It finances countries' for social development enhancement and institutional reform purpose.[96] This financing is inclined towards structural adjustment program which increases overall macroeconomic health and environment in the global financial system as a Micro-

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[90] The George C. Marshall Foundation, 'The Marshall Plan' <http://marshallfoundation.org/marshall/the-marshall-plan/> accessed 12-Feb-16; See also, Jerome I. Levinson, 'Worker Rights and the International Financial Institutions' in Daniel D. Bradlow and David B. Hunter (ed), *International Financial Institutions and International Law* (Kluwer Law International 2010) 322

[91] Articles of Agreement of the IBRD, Article I Purposes (unchanged since 1944): "(i) To assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes, including the restoration of economies destroyed or disrupted by war, the reconversion of productive facilities to peacetime needs and the encouragement of the development of productive facilities and resources in less developed countries. (ii) To promote private foreign investment by means of guarantees or participations in loans and other investments made by private investors; and when private capital is not available on reasonable terms, to supplement private investment by providing, on suitable conditions, finance for productive purposes out of its own capital, funds raised by it and its other resources. (iii) To promote the long-range balanced growth of international trade and the maintenance of equilibrium in balances of payments by encouraging international investment for the development of the productive resources of members, thereby assisting in raising productivity, the standard of living and conditions of labour in their territories. (iv) To arrange the loans made or guaranteed by it in relation to international loans through other channels so that the more useful and urgent projects, large and small alike, will be dealt with first. (v) To conduct its operations with due regard to the effect of international investment on business conditions in the territories of members and, in the immediate post-war years, to assist in bringing about a smooth transition from a wartime to a peacetime economy".

[92] The World Bank, 'What we do' <http://www.worldbank.org/en/about/what-we-do> accessed 12-Feb-16

[93] Ibid.

[94] UN MDG, 'We can end poverty MDG and beyond 2015' <http://www.un.org/millenniumgoals/bkgd.shtml> accessed 12-Feb-16.

[95] Ross P. Buckley and Douglas W. Arner (n 43) 8.

[96] Ibid. 8.

Prudential Regulator.[97] The World Bank focused on loans to governments for specific projects and increasingly, through the 1970s, for general budgetary support. Lending was supplemented by the provision of grants to the least developed countries, generally through the International Development Association ('IDA') created in 1960.[98]

The World Bank lent resources to states for general purposes and even for special projects, some of which have been inefficient and uneconomical.[99] This has created the understanding that World Bank should focus on private sector assistance which is more efficient and economical compared to state lending by way of International Finance Corporation (IFC) established in 1956 and Multilateral Investment Guarantee Agency (MIGA) established in 1988. The World Bank Group has enlarged its base with the incorporation of sisters' institutions IBRD, IFC, IDA, MIGA and International Centre for Settlement of Investment Disputes. These institutions are working on state lending, aids to LDCs, private sector project, investment assurances and the resolution of cross-border investment disputes.[100] This has increased financial flows to developing countries and LDCs, from, both the state and private sector side funding.[101]

- **International Finance Corporation (IFC):**

Robert L. Garner was the force behind the creation of IFC. It was established in 1956 as the private sector arm of the World Bank Group. IFC is the largest global development institution, focused exclusively on the private sector performance in member countries (Article I - Purpose)[102]. The essence of IFC is to develop efficient and competitive private

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[97] African Development Bank Group, 'Egypt Economic Reform And Structural Adjustment Programme' (Project Performance Evaluation Report, Operations Evaluation Department (OPEV), 15 May 2000) 1.
[98] The International Development Association (IDA), 'what is IDA' <http://www.worldbank.org/ida/what-is-ida.html> accessed 12-Feb-16.
[99] Ross P. Buckley and Douglas W. Arner, (n 48) 9.
[100] Ibid. 9.
[101] Ibid. 9.
[102] IFC Articles Of Agreement, 'Article 1 - Purpose' (As Amended through 27 June 2012) <http://www.ifc.org/wps/wcm/connect/1c95b500484cb68d9f3dbf5f4fc3f18b/IFC_Articles_of_Agreement.pdf?MOD=AJPERES> accessed 12-Feb-16; The detailed description of purpose is : "(i) In association with private investors, assist in financing the establishment, improvement and expansion of productive private enterprises which would contribute to the development of its member countries by making investments, without guarantee of repayment by the member government concerned, in cases where sufficient private capital is not available on reasonable terms; (ii) Seek to bring together investment opportunities, domestic and foreign private capital, and experienced management; and (iii) Seek to stimulate, and to help create

sector : "[I]n association with private investors, assist in financing for improvement and expansion of productive private enterprises where sufficient private capital is not available; create investment opportunities for domestic and foreign private capital and make conditions conducive for productive investment (...)".[103]

- **The International Development Association (IDA)**:

The IDA was established with the objective to improve the standard of living and economic development of less developed and poor countries in 1960. It is compliment and supplement to IBRD goal and objective (Article I, IDA Articles of Agreement).[104] Both IDA and IBRD share staff and infrastructure and evaluate projects with similar meticulous standards. IDA finance fund at a concessional rate as compared to IBRD, and it also provides loan with zero interest rate. It also provides grants or aid in the condition of high risk and distress debt.

- **The International Centre for Settlement of Investment Disputes (ICSID)**:

The ICSID is the part of World Bank Group for the resolution of international investment disputes. The multilateral international treaty established, the International Convention for the Settlement of Investment Disputes between States and Nationals of other States (the ICSID Convention).[105] The ICSID Convention entered into force on October 14, 1966. It has 159 signatory States, and 151 contracting states have ratified the convention as per 30 June 2015.[106] "The purpose of the Centre shall be to provide facilities for conciliation and

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conditions conducive to, the flow of private capital, domestic and foreign, into productive investment in member countries".

[103] Ibid.

[104] IDA Articles Of Agreement, 'Article I: Purposes' (Effective 24 September 1960); The purposes of IDA is "to promote economic development, increase productivity and thus raise standards of living in the less-developed areas of the world included within the Association's membership, in particular by providing finance to meet their important developmental requirements on terms which are more flexible and bear less heavily on the balance of payments than those of conventional loans, thereby furthering the developmental objectives of the International Bank for Reconstruction and Development (hereinafter called "the Bank") and supplementing its activities".

[105] ICSID Convention <https://icsid.worldbank.org/apps/ICSIDWEB/icsiddocs/Pages/ICSID-Convention.aspx> accessed 24 January 2016.

[106] ICSID, 'Background Information on the International Centre for Settlement of Investment Disputes (ICSID)' <https://icsid.worldbank.org/apps/ICSIDWEB/about/Documents/Overview%20of%20ICSID%20(English).pdf> accessed 12-Feb-16.

arbitration of investment disputes between the Contracting States and nationals of other Contracting States in accordance with the provisions of this Convention" (Article I, Chapter I).[107]

The primary mission of ICSID is to facilitate services to support conciliation and arbitration of international investment disputes. This practice is entirely voluntary under the Convention. In this process both investor and host state require consent.[108] After consent is given, both parties cannot withdraw unilaterally. It becomes a binding undertaking. ICSID is an impartial facility where they appoint independent arbitrators and conciliators in each case. This makes ICSID an independent, depoliticized and efficient institution. It also provides services on the state to state dispute in the context of investment treaties and regional trade agreement. By doing this task, it promotes awareness about global financial regulation. It also publishes foreign investment law journal and its cases.[109]

- **Multilateral Investment Guarantee Agency (MIGA):**

The MIGA convention established new members of the World Bank Group on April 12, 1988.[110] Its primarily objective is to strengthen global cooperation for economic development and promote foreign investment. It provides insurance for mitigating the problem of negative externalities and uncertainty. This creates an environment of stability and certainty in foreign investment (Preamble, MIGA).[111] The rationale for providing foreign investors with insurance against non-commercial risk[112] has improved overall investment in emerging countries and LDCs. However, there are challenges with regard to political risk.

[107] ICSID Convention, 'Article 1- Purpose, Ch I, International Centre for Settlement of Investment Disputes, Section 1: Establishment and organization' (ICSID/15 April 2006) <https://icsid.worldbank.org/apps/ICSIDWEB/icsiddocs/Pages/ICSID-Convention.aspx> accessed 12-Feb-16.
[108] ICSID, 'About ICSID' <https://icsid.worldbank.org/apps/icsidweb/about/pages/default.aspx> accessed 12-Feb-16.
[109] Ibid.
[110] MIGA, 'History' <https://www.miga.org/who-we-are/history/> accessed 12-Feb-16.
[111] MIGA, 'Preamble - Convention Establishing the Multilateral Investment Guarantee Agency' (amended by the Council of Governor, 14 November, 2010) 1 <https://www.miga.org/documents/miga_convention_november_2010.pdf> accessed 12-Feb-16.
[112] Convention Establishing the Multilateral Investment Guarantee Agency, 'Article 2 (a) Objective' (amended by the Council of Governor, 14 November, 2010) 1 accessed 12-Feb-16.

'The Multilateral Investment Guarantee Agency is an autonomous international organization with "full juridical personality" under international law and the domestic laws of its members' (Article 1).[113] The main objective is 'to encourage the flow of investments for productive purposes among its member countries (…)' (Article 2).[114] The reference to "investments for productive purposes" emphasizes the Agency's concentration on concrete projects and programs in all sectors of the economy. Over and above guaranteeing investments against non-commercial risks, the agency carries out complementary activities to promote investment flows (Article 2(b)).[115] Article 23 of the Convention sets out the investment promotional activities that "the Agency shall carry out research; undertake activities to promote investment flow (…).[116]

3.2. Multilateral Development Organizations: Based on World Bank model, various other Multilateral Development Organizations have developed to make the GFRS stronger. Including,

- The UN Development Programme (UNDP),[117]
- The UN Conference on Trade and Development (UNCTAD) [118]
- The African Development Bank (AfDB) [119]
- The Asian Development Bank (ADB)[120]
- The Inter-American Development Bank (IADB)[121]
- The European Bank for Reconstruction and Development (EBRD)

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[113] Convention Establishing the Multilateral Investment Gurantee Agency, 'Article 1' ((amended by the Council of Governor, 14 November, 2010) 2.

[114] Article 2, Convention Establishing the Multilateral Investment Gurantee Agency (amended by the Council of Governor, 14 November, 2010) 2 <https://www.miga.org/documents/miga_convention_november_2010.pdf> accessed 24 January 2016.

[115] Ibid.

[116] Convention Establishing the Multilateral Investment Guarantee Agency, 'Article 23' (amended by the Council of Governor, 14 November, 2010) 17.

[117] UNDP is based on the consolidation of the United Nations Expanded Programme of Technical Assistance, created in 1949, and the United Nations Special Fund, established in 1958. The UNDP was established in 1965 by the General Assembly of the United Nations. A/RES/2264(XXII) B, C.5, A/PV.1598, 16 Nov. 1967

[118] UNCTD, 'About UNCTAD' <http://unctad.org/en/Pages/AboutUs.aspx> accessed 12-Feb-16.

[119] Founded in 1964: AfDB, The African Development Bank Group — Fast Facts (2010) <http://afdb.org/en/about-us>.

[120] Founded in 1966: ADB, About ADB <http://www.adb.org/About>.

[121] Established 1959: IADB, About the Inter-American Development Bank (2010) <http://www.iadb.org/en/about-us>

- Other multilateral financial institutions[122]
- Sub-regional development banks [123]
- National development agencies[124]

The World Bank works closely with the international institutions to improve the coordination of aid policies and practices in countries, at the regional level and at the global level, i.e., Multilateral Development Banks[125], Multilateral Financial Institutions,[126] Sub-Regional Banks[127] and Aid Coordination Groups.[128]

[122] Leading examples include the European Commission and European Investment Bank, the International Fund for Agricultural Development, the Islamic Development Bank, the Nordic Development Fund and Nordic Investment Bank, and the OPEC Fund for International Development.

[123] Examples include the Corporation Andina de Fomento, the Caribbean Development Bank, the Central American Bank for Economic Integration, the East African Development Bank and the West African Development Bank.

[124] The most active include: the Australian Agency for International Development, the Canadian International Development Agency, the Agence Française de Développement, the Deutsche Gesellschaft für Technische Zusammenarbeit and the Kreditanstalt für Wiederaufbau, the Japan Bank for International Cooperation and the Japan International Cooperation Agency, the UK Department for International Development and the US Agency for International Development.

[125] Multilateral Development Banks are institutions that provide financial support and professional advice for economic and social development activities in developing countries. The term Multilateral Development Banks (MDBs) typically refers to the World Bank Group and these four Regional Development Banks:The African Development Bank, The Asian Development Bank, The European Bank for Reconstruction and Development and The Inter-American Development Bank Group.

[126] Several other banks and funds that lend to developing countries are also identified as multilateral development institutions, and are often grouped together as other Multilateral Financial Institutions (MFIs). They differ from the MDBs in that they have a narrower ownership/membership structure and they focus on special sectors or activities. Among these are: The European Commission and The European Investment Bank, International Fund for Agricultural Development, The Islamic Development Bank, The Nordic Development Fund and The Nordic Investment Bank and The OPEC Fund for International Development.

[127] A number of Sub-Regional Banks, established for development purposes, are also classified as multilateral banks, as they are owned by a group of countries (typically borrowing members and not donors). Among these are banks such as : Corporacion Andina de Fomento; Caribbean Development Bank; Central American Bank for Economic Integration; East African Development Bank and West African Development Bank.

[128] The World Bank Group works in partnership with the development agencies of individual countries to better coordinate aid and to more effectively achieve development goals. Work is coordinated by various committees and consultations that take place throughout the year. See the Comprehensive Development Framework for more information on the Bank's work with aid coordination groups, some of which are listed here: Australian Agency for International Development, Austrian Development Agency, Canadian International Development Agency, Danish Development Agency, Department for International Development Cooperation (Finland), Agence francaise de developpement, Deutsche Gesellschaft fur Technische Zusammenarbeit GmbH, Ireland Development Cooperation, Japan Bank for International Cooperation, Japan International Cooperation Agency, Kreditanstalt fur Wiederaufbau, Netherlands Development Cooperation, New Zealand Official Development Assistance, Norwegian Agency for Development Cooperation, Swedish International Development Cooperation Agency, Swiss Agency for Development and Cooperation, Swiss State Secretariat for Economic Affairs, U.K. Department for International Development, U.S. Agency for International Development.

3.3. Role and Function of WTO in GFRS

The Global financial regulatory system developed its trade with the condition of fixed exchange rates and imperfect capital mobility. The objective was to restore international trade and finance linkages.[129] The international trade relationship was structured through a series of rounds of negotiations executed through General Agreement on Tariffs and Trade (GATT) 1947, which was intended to serve a formal role in reducing trade barriers[130] and promoting cross-border investment. The Havana UN Conference on Trade and Employment[131] proposed to establish an International Trade Organization (ITO) as a third global economic pillar alongside the IMF and World Bank.[132] The ITO was to be a UN expert agency. It would address trade concerns along with concern related to employment, investment, and restrictive business custom.[133] The various lobbies such as the National Association of Manufacturers (NAM), the US Chamber of Commerce began to oppose the ITO.[134] The ITO treaty was not approved and never went into effect. The GATT became over the years a de facto international organization since legally it was not a treaty requiring ratification but rather an executive agreement that could be implemented without

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[129] Rolf H. Weber and Douglas W. Arner (n 53) 396.
[130] Alejo Etchart, 'Lessons from GATT-WTO for enhancing UNEP' (Environmental Consultant and Advisor to Stakeholder Forum SDG2012, , 2012) 3
<http://www.stakeholderforum.org/fileadmin/files/Lessons%20from%20GATT-WTO%20for%20enhancing%20UNEP.pdf> accessed 12-Feb-16.
[131] 'Havana Charter' (24 March 1948). UN Doc E/Conf 2/78; Havana Charter for an International Trade Organization opened for signature 24 March 1948, UN Doc E/Conf 2/78, United Nations publication, Sales No. 1948. II.D.4 (not yet in force). Under the Havana Charter art I: the ITO was to promote national and international action designed to achieve the following objectives: (1) To assure a large and steadily growing volume of real income and effective demand, to increase the production, consumption and exchange of goods, and thus to contribute to a balanced and expanded world economy. (2) To foster and assist industrial and general economic development, particularly of those countries which are still in the early stages of industrial development, and to encourage the international flow of capital for productive investment. (3) To further the enjoyment of all countries, on equal terms, of access to the markets, products and productive facilities which are needed for their economic prosperity and development. (4) To promote on a reciprocal and mutually advantageous basis the reduction of tariffs and other barriers to trade and the elimination of discriminatory treatment in international commerce. (5) To enable countries, by increasing the opportunities for their trade and economic development, to abstain from measures which would disrupt world commerce, reduce productive employment or retard economic success. (6) To facilitate through the promotion of mutual understanding, consultation and co-operation the solution of problems relating to international trade in the fields of employment, economic development, commercial policy, business practices and commodity policy.
[132] Alejo Etchart (n 130) 4.
[133] Ibid.4.
[134] Ibid.4.

legislative support.[135] The GATT was the only multilateral instrument governing international trade from 1945 until the WTO was set up.[136]

Over the next 50 years, gradually, there was a reduction of trade barriers, especially among developed economies. In 1994, member countries decided to the establish of the WTO, reflecting a general consensus in support of greater trade liberalization and the need to extend the global trade regime. Therefore, by the 50th anniversary of the Bretton Woods Conference in 1994, the successor to the ITO had finally emerged amidst much fanfare and high expectations. The Marrakesh Agreement entered into force on 1 January 1995[137] with its annexes, including, *inter alia*, the GATT 1994, TRIPS agreement related to Intellectual Property Rights and the GATS agreement[138] related to General Agreement on Trade in Services[139] where the legal aspect related to all service sectors including financial services were incorporated.[140] These segments contain a number of general obligations respecting trade and financial services contained in the various agreements, as well as most-favoured-nation ('MFN') treatment. '"[S]ervices" includes any service in any sector except services supplied in the exercise of governmental authority' (GATS Article I 3(b)).[141]

The WTO created a global structure on financial services issues for global stakeholders. The trade and financial liberalization are largely independent subject up to the member

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[135] John Odell and Barry Eichengreen, 'The United States, the ITO, and the WTO : Exit Options, Agent Slack, and Presidential Leadership' in Anne O. Krueger and Chonira Aturupane (ed), *The WTO as an International Organization* (University of Chicago Press 2000) 181-182.
[136] Alejo Etchart (n 125) 4.
[137] World Trade Organization, *Understanding the WTO* (5th edn, WTO, Information and External Relations Division) 10.
[138] Emilios Avgouleas, *Governance of Global Financial Markets: The Law, the Economics, the Politics* (Cambridge University Press 2012) 183.
[139] Ross P. Buckley and Douglas W. Arner (n 43) Ch 5. 80; also see, Marrakesh Agreement set up the WTO opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1B ('General Agreement on Trade in Services') (GATS).
[140] The main legal components affecting international trade in financial services include: GATS, annex on Financial Services, Second annex on Financial Services, Understanding on Commitments in Financial Services, Second Protocol to the GATS, Fifth Protocol to the GATS, Decisions, and Understanding on rules and Procedures Governing the Settlement of Disputes (DSU). These components contain a number of general obligations respecting trade and financial services contained in the various agreements, including most-favoured nation (MFN) treatment, transparency and the effect of domestic regulation; see also Emilios Avgouleas (n 133) 183.
[141] Ibid. 80.

countries to decide. However, there are challenges related to macroeconomic aspect in the context of the trade-off between financial liberalization and financial stability.[142]

Article XV (2) of GATT 1994 provision dealing with WTO requires consultation with IMF.[143] The IMF will give expert opinion in issues related to deficit or problem in forex reserve, balance of payment and exchange rate fluctuation. Further, Article 13.1[144] of the Dispute Settlement Understanding (DSU) allows a panel "to seek information and technical advice from any individual or body which it deems appropriate". The panel also has the authority to accept or reject any information or advice. Article 13.2[145] of the DSU states that the panel may seek information from individual experts rather than expert review group pursuant. Further, the panel is not duty bound to seek information in each and every cases. It is clearly to support Micro-Prudential Regulators (eg. IMF) who interact with WTO and vice versa. There is evidence that the WTO had developed core principles to address the conditions of global financial integration.

3.4. The Role of UN in GFRS

The UN's role in GFRS is limited to transparency and accountability purpose whereas the ECOSOC and UNCTAD as well as the basic guideline of Millennium Development Goals (MDGs) provide a platform to stakeholders to raise questions or discuss/ debate about Micro-Prudential and Macro-Prudential Regulators about the path and roadmap in global financial system. However, it lacks formal institutional linkage in the condition of global financial integration. The following UN bodies represent their task in the global financial regulatory mechanism.

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[142] Ross P. Buckley and Douglas W. Arner (n 43) 80.

[143] GATT 1947, 'The Article XV (2)' <https://www.wto.org/english/docs_e/legal_e/gatt47_01_e.htm> accessed 19-Feb-16; See also, Annamaria Viterbo, *International economic law and monetary measures: Limitations to states' sovereignty and dispute settlement* (Elgar international economic law, Edward Elgar 2012) 230.

[144] WTO, 'WTO analytical index: Guide to WTO Law and Practice - Understanding on Rules and Procedures Governing the Settlement of Disputes' (30 January 2013) <https://www.wto.org/english/res_e/booksp_e/analytic_index_e/dsu_06_e.htm> accessed 12-Feb-16; See also, Federico Ortino and Ernst-Ulrich Petersmann, *The WTO Dispute Settlement System, 1995-2003* (Kluwer Law International 2004) 432.

[145] WTO (n 139).

3.4.1. ECOSOC is "the organ of the UN set up by the UN Charter in 1946.[146] It is the specialized body for policy review, policy discussion, coordination, recommendations, and implementation on socio-economic and environment concern (…)." (Chapter X: The Economic and Social Council, Functions and Powers, Article 62).[147] It engages a wide range of stakeholders: academics, policymakers, parliamentarians, corporate sector representative, NGOs, foundations in a qualitative dialogue on sustainable development through a programmatic cycle of meeting. They work on issue-based approach with annual theme that is guided by the council. It promotes balanced integration of the economic, social and environmental dimensions of sustainable development both within the United Nations system and beyond.[148]

3.4.2. Millennium Development Goals (MDGs) is not directly correlated to GFRS. However, MDGs[149] created a challenge to the Micro and Macro-Prudential regulators on issues of ground reality. The MDGs demonstrate that further collective long-term efforts are required to address the root cause of the problem of inaccessibility of basic necessities to the most vulnerable people, particularly the poorest and those disadvantaged because of their sex, age, disability, ethnicity or geographic location.[150] The MDGs initiated with a broad vision to fight poverty. The mission was translated into eight Millennium Development Goals (MDGs) and has remained the overarching development framework for the world for the past 15 years.[151] The current world economy development is highly interdependent with social transform action. The emerging post-2015 development agenda

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146 UN Economic and Social Council, 'Ch X, Article 61 to 72' <http://www.un.org/en/ecosoc/about/> accessed 12-Feb-16.

147 UN Economic and Social Council', 'Ch X, Article 62: Functions and Powers' <http://www.un.org/en/sections/un-charter/chapter-x/index.htm> accessed 12-Feb-16.

148 UN Economic and Social Council (n 141).

149 United Nations Millennium Declaration, 'GA Res 55/2, UN GAOR, 55th session, 2nd mtg, Agenda Item 60b' (18 September 2000). UN Doc A/Res/55/2); See also, 'Road Map towards the Implementation of the United Nations Millennium Declaration: Report of the Secretary-General: Report of the Secretary-General' (6 September 2001). GA Res 56/326, UN GAOR, 56th sess, Agenda Item 40, UN Doc A/56/326

150 UN, 'The Millennium Development Goals Report 2015' (2015 Time for Global Action for People and Planet) <http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf> accessed 12-Feb-16.

151 Ibid.

are set of Sustainable Development Goals, where all countries have prioritized to move towards a more prosperous, sustainable and equitable world.[152]

3.4.3. The United Nations Conference on Trade and Development (UNCTAD) was developed with the intention to deliver issues related to trade and investment structure for promoting overall global macroeconomic policies in 1964.[153] It focuses on trade, finance, investment and technology in the perspective of sustainable development.[154] It institutionalizes minister level meeting every four years and organizes World Investment Forum every two years to address challenges and opportunities of global economic concern. It also coordinates activities of other institutions within the UN in the field of international trade and connected progress.

3.5. The Role of BIS in GFRS

The Bank for International Settlement (BIS) is the oldest global financial organization set up in 1930. The BIS representations cover length and breadth of around 95% of global GDP.[155] "The operations of the Bank shall be in conformity with the monetary policy of the central banks of the countries concerned (…)".[156] Further, BIS may also act as agent or correspondent of any central bank (…)".[157] Moreover, the BIS mandate is to pursue financial stability and provide platform to central banks authority to coordinate and collaborate with subjects related to global financial system's continuous transform action.[158] It's significance multiplied in GFRS with hosting and providing base to committees such as the Basel Committee on Banking Supervision (BCBS), the committee on Payments and Market Infrastructures (CPMI), the Committee on the Global Financial System (CGFS), the Markets Committee, the Central Bank Governance Forum, and the

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[152] Ibid.
[153] UNCTAD, 'UNCTAD - Prosperity for all' (January, 2015) 2 <http://unctad.org/en/PublicationsLibrary/osgcio2014d2_en.pdf> accessed 12-Feb-16
[154] Ibid. 14.
[155] BIS, 'About BIS' <https://www.bis.org/about/index.htm?l=2&m=1%7C1> accessed 12-Feb-16.
[156] Statutes of the Bank for International Settlements, 'Ch III Powers of the Bank, Article 19' (of 20 January 1930; text as amended on 27 June 2005) 14.
[157] Statutes of the Bank for International Settlements, 'Ch III Powers of the Bank, Article 21 (k)' (of 20 January 1930; text as amended on 27 June 2005) 16.
[158] Ibid.

Irving Fisher Committee on Central Bank Statistics (IFC).[159] The BIS's Financial Stability Institute facilitates the dissemination of standard-setting bodies work. In addition, it provides base to Financial Stability Board (FSB), International Association of Insurance Supervisors (IAIS) and International Association of Deposit Insurers (IADI), though these three group have their separate legal identity and own governance mechanism.[160] Before the global financial crisis, the work of Basel host committees: the BCBS, CGFS, CPMI and Market Committee and institutes: FSB, IAIS and IADI were to estimate measures undertakes in areas where they had issued warning about the dangerous build-up of imbalance in the GFRS. This collective efforts of Micro and Macro Prudential Regulators played an effective role in mitigating the GFC and subsequently also proposed further standards and regulations after the crisis.[161]

3.6. The Role of G10 committees in GFRS

International institutional framework was lacking regulation in the area of cross border finance. These groups emerged in the late 1960s by a range of informal groups of developed countries, including G10, G5, G6, G7 and G8 as the most significant forum for financial cooperation. These various groups met at the level of finance ministers and central bank governors, as well as deputies and heads of government with regard to cross-border financial issues.[162]

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159 BIS, 'Organisation and governance – Overview' <https://www.bis.org/about/orggov.htm?m=1%7C2%7C603> accessed 12-Feb-16.

160 BIS, 'Basel Process' <https://www.bis.org/about/basel_process.htm> accessed 12-Feb-16.

161 Ibid.

162 Patrick M. Liedtke and Jan Monkiewicz, 'The Institutional Framework for Global Insurance Regulation and Supervision: The Changing Landscape' (The Geneva Association, December 2012) 19.

Figure V: G-5 to G-20 Group[163]

G-5	G-7	G-8	G-10	G20
Germany	Germany	Germany	Germany	Germany
Japan	Japan	Japan	Japan	Japan
France	France	France	France	France
U.S.	U.S.	U.S.	U.S.	U.S.
U.K.	U.K.	U.K.	U.K.	U.K.
	Italy	Italy	Italy	Italy
	Canada	Canada	Canada	Canada
		Russia	Belgium	Russia
			Sweden	Argentina
			Netherlands	Australia
			Switzerland	Brazil
				China
				India
				Indonesia
				Mexico
				Saudi Arabia
				South Africa
				South Korea
				Turkey

Source: Banque de France (2010), p. 125

The G-10, comprising of ten prominent developed nations started to meet on a regular basis at the BIS to harmonize central bank policy and provided lending facility through General Arrangements to Borrow. These ten countries plus the Swiss National Bank got the status of G-10. The G10 set up two committees: the Eurocurrency Standing Committee (established in 1962) which later became the Committee on Global Financial System[164] and the Committee on Payment and Settlement System.[165] They also set up the Basel Committee on Banking Supervision to look after cross-border banking concern.[166] These

[163] Banque de France, 'Financial crisis, economic crisis, Documents and debates' (2010). No. 3, Banque de France , 125 <https://www.banque-france.fr/fileadmin/user_upload/banque_de_france/publications/financial-crisis-economic-crisis-documents-and-debates-n3.pdf> accessed 12-Feb-16.

[164] BIS, 'History of the Basel Committee' (1 October 2015) <http://www.bis.org/bcbs/history.htm> accessed 12-Feb-16.

[165] Ibid..

[166] Kern Alexander, 'Global Financial Standard Setting, the G10 Committees, and International Economic Law' (2009) 34(3) Brooklyn Journal of International Law , 867 <http://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1178&context=bjil> accessed 12-Feb-16.

committees promoted discussion and development of common solutions to cross-border financial issues, with the domestic implementation of 'soft law' in international agreements.

3.6.1. The Role of the Basel Committee on Banking Supervision in strengthening GFRS:

The bankruptcy of major banks in three nations came into the limelight of the international banking community, highlighting the need to enhance global banking regulation in 1974. In the same year, West German authorities shut down the Herstatt Bankhaus.[167] It faced huge loss in the foreign exchange dealing.[168] Britain shut down British-Israel Bank of London for bankruptcy problems.[169] In 1974, the Franklin National Bank in the US went insolvent due to unstable national wholesale deposit base, high speculation in global forex market and dynamic international linkage. It was evident that the global financial sector had no formal mechanism for coordinating the national regulatory authorities. This banking crisis revealed the inadequacy of international banking supervision. Based on the regulatory gap in the banking sector, the G-10 set up the Committee on Banking Regulation and Supervisory Practices in 1974. The same was recognized by the Basel Committee on Banking Supervision[170] or Basel Committee. The Basel Committee lacks formal or supranational authority, therefore it developed legally nonbinding best practices in the banking sector through the adoption of the Core Principles for Effective Banking Supervision in 1975.[171] The BIS hosted and provided administrative assistance to the Basel Committee.

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[167] Ibid. 870.
[168] Ibid.869.
[169] Ibid.869.
[170] BIS (n 159).
[171] Basel Committee on Banking Supervision (BCBS), 'Charter, Article 3 Legal status' (January 2013); See also, E. Klein, *Global banking issues (Financial Institutions and Services)* (Nova Science Publishers 2005) 42.

The Basel Committee broad mandates on the cross-border banking issues and challenges.[172] It prepares stringent supervisory measures which mitigate the risks of banking failures and develop fair competitive environment among cross banking jurisdiction. Based on the requirement, they develop and upgrade existing norms. In the background of the collapse of the Italian bank Banco Ambrosiano, the Basel Committee amended Concordat in 1983.[173] This revised Concordat became a Principle for the Supervision of Banks' Foreign Establishments.[174] It provided a framework in which domestic regulators ensure responsibility in credit risk exposure, quality of assets and the capital adequacy ratio norms for the transnational operations of home country banks. Further, the host country authorities were made responsible for the provision of liquidity requirement to a foreign bank.[175] These rules and procedures were framed to ensure that the banks operating in a foreign country should fulfill adequate supervision norms. This approach was termed as a 'consolidated regulation'[176] and 'dual key' supervision.[177]

In early 1980's the storm of the Latin American debt crisis and bankruptcy of major US banks made Basel Accord more stringent. In 1988, the Basel Accord implemented

[172] Article 2 Activities **:** The BCBS mandate: (a) exchanging information on developments in the banking sector and financial markets, to help identify current or emerging risks for the global financial system;(b) sharing supervisory issues, approaches and techniques to promote common understanding and to improve cross-border cooperation; (c) establishing and promoting global standards for the regulation and supervision of banks as well as guidelines and sound practices; (d) addressing regulatory and supervisory gaps that pose risks to financial stability;(e) monitoring the implementation of BCBS standards in member countriesand beyond with the purpose of ensuring their timely, consistent and effective implementation and contributing to a "level playing field" among internationally-active banks; (f) consulting with central banks and bank supervisory authorities which are not members of the BCBS to benefit from their input into the BCBS policy formulation process and to promote the implementation of BCBS standards, guidelines and sound practices beyond BCBS member countries; and (g) coordinating and cooperating with other financial sector standard setters and international bodies, particularly those involved in promoting financial stability (Basel Committee on Banking Supervision (BCBS) Charter).

[173] Eilís Ferran and Charles Albert Eric Goodhart, *Regulating Financial Services and Markets in the Twenty First Century* (Hart 2001) 281; See also, Kern Alexander, 'Global Financial Standard Setting, the G10 Committees, and International Economic Law' (n 161) 870

[174] Kern Alexander, Rahul Dhumale, and John Eatwell, *Global governance of financial systems: The international regulation of systemic risk* (Finance and the economy, Oxford University Press 2006) 47

[175] Ibid. 48.

[176] Consolidated supervision mean "Parent bank and parent supervisory authorities monitor the risk exposure of the banks or banking groups for which they are responsible, as well as the adequacy of their capital, on the basis of the totality of their business wherever conducted"; See also, Johanne C. Prevost, 'Consolidated Supervision Basel Committee on Banking Supervision' (Seminar for Senior Bank Supervisors, 20 October 2000) 9.

[177] Dual key supervision means that the regulatory authority of each nation concurrently assesses the other's ability to supervise and carry out its respective responsibilities; See also, Chris Brummer, *Soft law and the global financial system: Rule making in the 21st century* (2nd edn, Cambridge University Press) 78.

minimum eight percent capital adequacy requirements on the international bank within G-10 countries jurisdiction. It harmonized banking regulation among the G-10 countries on the line of execution of international minimum standard and created level playing field for banks operating globally. Also, it was intended to prevent the bank from increasing their exposure to credit risk by imprudently incurring high leverage. This 1988 Basel I Accord was entitled 'International Convergence of Capital Measurement and Capital Standards' (Basel I 1988).[178]

In the same year, the Basel Committee issued the guidelines for deterrence of unlawful use of the banking system for the purpose of money laundering. The Money Laundering (Statement on Prevention)[179] to trace and help regulators to prevent criminals from using the financial system. It has given a clear signal to financial institutions to ensure integrity and reliability and not to follow association with money laundering activities.[180]

The Basel Concordat of 1983 was enhanced in 1990, known as 'Information Flows between Banking Supervisory Authorities'.[181] This enhancement was made to develop the quality of regulation of cross-border banking.[182] It recommended supervisory authorities to undertake an affirmative commitment to cooperate with each other on all prudential supervisory matters. Further, the collapse of Bank of Credit and Commerce International (BCCI) in Jul 1991 exposed regulatory bottlenecks where banks were operating in more

[178] Basel Committee on Banking Supervision, 'International convergence of capital measurement and capital standards' (July 1988) <http://www.bis.org/publ/bcbs04a.htm> accessed 12-Feb-16

[179] Bangladesh Financial Intelligence Unit, 'Guidance Notes on Prevention of Money Laundering and Terrorist Financing' (16 September, 2012) 11 <https://www.bb.org.bd/aboutus/regulationguideline/aml/16sep2012guideline.pdf> accessed 12-Feb-16.

[180] Ibid.

[181] Bank for International Settlements, 'Information flows between banking supervisory authorities (Supplement to the Concordat)' (April 1990) <http://www.bis.org/publ/bcbsc313.pdf> accessed 12-Feb-16.

[182] Ibid.

than one jurisdiction.[183] In the BCCI failure, it was clearly evident that both home and host countries had bypassed supervision.[184]

Based on the regulatory gap in BCCI scandal, the Basel Committee 1992 develop a report on a minimum standard for the regulation of cross-border dynamics.[185] The minimum standards jurisprudence built strong core consolidated supervision, dual key supervision, and well-informed national jurisdiction. This Basel accord was originally based on a calculation of bank's credit risk exposure but later on was amended in 1996 in which it upgraded to a bank's market risk exposure. Further, it extended the eight percent capital adequacy requirement to a bank's trading book activities.[186]

Between 1999 and 2004, the Committee engaged in a revision of the Basel I to Basel II norms. The Basel II capital accord was published in June 2004. It designed to make regulatory capital more sensitive to the risks which bank face in the marketplace. This has allowed banks to hold less regulatory capital for their credit, market and operation risk exposures than what was required in Basel I. There were challenges faced by Basel II such

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[183]The BCCI group had one top-tier shell holding company, BCCI Holdings, S.A., incorporated in Luxembourg. BCCI Holdings, S.A., in turn, owned all of the shares of two operating holding companies, BCCI, S.A., a Luxembourg company, and BCCI Overseas, incorporated in the Cayman Islands. The two operating companies owned subsidiaries, branches, agencies, and representative offices in sixty-nine countries covering every continent except Antarctica; See also, Raj Bhala, 'Tragedy, Irony, and Protectionism after BCCI: A Three-Act Play Starring Maharajah Bank' [1994] Paper 847, William & Mary Law School Scholarship Repository, Faculty Publications , 14 <http://scholarship.law.wm.edu/facpubs/847> accessed 12-Feb-16.

[184] Ibid.

[185] Eilís Ferran, Charles Goodhart, *Regulating financial services and markets in the twenty first century* (Bloomsbury Publishing, 2001) 282-83, Moreover, The Basel Committee, Minimum Standards for the Supervision of International Banking Groups (3-7 July 1992) : (a) all international banking groups and international banks should be supervised by a home-country authority that capably performs consolidated supervision; (b) the creation of a cross-border banking establishment should receive the prior consent of both the host-country supervisory authority and the bank's, and if different, the banking group's home-country supervisor; (c) supervisory authorities should possess the right to gather information from the cross-border banking establishments of the banks or banking groups for which they are the home-country supervisor, and (d) if a host-country authority determines that any one of the foregoing minimum standards has not been met to its satisfaction, that authority could impose restrictive measures necessary to satisfy its prudential concerns consistent with these minimum standards, including the prohibition of the creation of a banking establishment.

[186] Basel Committee on Banking Supervision, 'Explanatory Note Modification of the Basel Capital Accord of July 1988, as amended in January 1996' (19th September 1997) <http://www.bis.org/press/p970918a.htm> accessed 26-Feb-16; Also see, Nadia A Al-Anani, 'Evaluation of the impact of international standards set by " the Basel committee on banking supervision" on Jordanian law' (D Phil thesis, Durham Law School 2009) 70 <http://etheses.dur.ac.uk/2150/1/2150_158.PDF?UkUDh:CyT> accessed 29 January 2016.

as the need to approve the use of certain approach to risk measurement in multiple jurisdictions. Though it was already there in the market risk amendment in 1996, but the degree of cooperation between home and host supervisor was increased in Basel II. However, the Basel II was agreed upon and adopted by several non-member countries on different timescales.[187]

The banks were exposed in the concern of large liquidity to risks in off-balance sheet transaction which increased loss-absorbent capital during global financial crisis 2007-09.[188] The pro-cyclelist argue that banks increase their capital buffer during booms and follow the reverse in case of down downturn, whereas counter-cyclicalist argue that banks reduced capital buffer during boom and inverse in the event of a downturn.[189] In reality, banks were following the opposite of pro-cyclical and counter-cyclical principal.[190] Large banks were favoured with sophisticated databases over small banks that allowed larger banks to hold less capital as a percentage of risk-weighted assets compared to the medium size and small banks.[191] This has clearly benefited advanced economies at the cost of emerging economies, as banks in advanced economies had access to large amount of default data on borrowers and counterparties. Therefore, they were in a better position to devise lesser risk based on the model which resulted in lower capital requirement.[192] The phenomena of pro-cyclicality of Basel II created a destructive effect in the overall global financial system, where more exposure to volatility began with boom and ended with burst.[193]

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187 BIS, 'History of the Basel Committee' (1 October 2015) <http://www.bis.org/bcbs/history.htm> accessed 12-Feb-16.
188 Ibid.
189 Ha Vu and Sean Turnell, 'The Behavior of Australian Banks‟ Capital Buffers: Pro- or Counter-Cyclical?' (2015) 2(1) Applied Economics and Finance , 110 <http://redfame.com/journal/index.php/aef/article/view/654> accessed 12-Feb-16.
190 Kassim J. Durrani, 'Regulatory Capital Requirements and Capital Buffers: An Examination of the Australian Banking Sector' (May 2014) 5-11 <https://www.eurofidai.org/Durrani_2014.pdf> accessed 12-Feb-16.
191 Louis A. Kasekende, 'The Relevance of Global Reform of Bank Regulation: A Perspective from Africa' [2015] Journal of African Development , 10 <http://www.jadafea.com/wp-content/uploads/2015/12/JAD_vol17-2_ch1.pdf> accessed 12-Feb-16.
192 BIS (n 182).
193 Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' [2015] Preliminary draft, Rethinking Stakeholder Participation in Global Governance , 29 <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/activities/Alexander_Global_Financial_Governance_EarlyDraft.pdf> accessed 12-Feb-16.

3.6.2. The Committee on Payment and Settlement System (CPSS) and the Committee on the Global Financial System (CGFS) in strengthening GFRS:

The Committee on Payment and Settlement System (CPSS) and the Committee on Global Financial System (CGFS) have developed standards, principles, codes, guidelines, frameworks, and reports that have a significant impact on the development of domestic public law standards, national regulations, and supervisory practices. Both the committees function with a network of working groups. The committee also has a relationship with other central banks from non-member jurisdiction. The detailed structure of both the committees have been described in the following paragraph:

- **The Committee on Payment and Settlement System (CPSS)**

  CPSS has mandate to prepare standards for efficient payment and settlement at international level. In the light of the financial crisis, the CPSS reviewed its mandate which was approved in September 2013 by the Global Economy Meeting (GEM).[194] The CPSS was renamed as the Committee on Payments and Market Infrastructures (CPMI) effective from 1 September 2014. So, in the post-global financial crisis, the committee extended the mandate to safe and efficient clearing settlement with market infrastructure which includes financial stability worldwide.[195] The CPSS consists of the central banks officials who examine issues of payment system regulation as well as clearing and settlement of securities and foreign exchange transactions.[196] The CPSS looks after monitoring and identifies risks for the safety with the objective to promote global standards and recommendations for their implementation. It has published various reports examining large-value funds transfer systems, securities settlement systems, foreign exchange settlement mechanisms, clearing arrangements for exchange traded derivatives and retail payment instruments, including electronic money. Its Red Book[197]on payment systems provides extensive information on the most important systems in the CPSS countries.

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[194] BIS, 'Global Economy Meeting (GEM)' (14-Oct-14) <http://www.bis.org/about/bimonthly_meetings.htm> accessed 22-Feb-16.

[195] Charter of the Committee on Payment and Market Infrastructures, 'Article 1 Role' (01-Sep-14) 1 <https://www.bis.org/cpmi/charter.pdf> accessed 22-Feb-16.

[196] Committee on Payment and Settlement Systems, 'Payment, clearing and settlement systems in the CPSS countries' (1 September 2011) <http://www.bis.org/cpmi/publ/d97.pdf> accessed 22-Feb-16.

[197] BIS, 'CPMI - BIS - Red Book: various countries' <http://www.bis.org/list/cpmi/tid_58/> accessed 22-Feb-16.

- **The Committee on the Global Financial System (CGFS)**

CGFS is a forum for central bankers that examine and monitor broad concerns related to the global financial system.[198] It suggests relevant policy to accomplish monetary and financial stability. The principal objective of the Committee is to detect and evaluate possible sources of stress in the global financial system. The Committee works on a framework to increase transparency of international finance by the publication of statistics and information by the assistance of central banks including BIS support. The Committee interacts with other supranational and global institution for pursuing its mandates and objectives.[199]

3.7. The role of Global Financial Supervisory Bodies in GFRS

The Global Financial Supervisory Bodies (GFSB) focus on developing Micro-Prudential Norms i.e. the specific supervisory body prepares specific sector norms, for example, the IOSCO prepares a specific guideline for securities market. The intention of Micro-Prudential Regulator is to strengthen the specific sector. Whereas Marco-Prudential Regulators work on global economy as a whole, that is coordinating with all existing Micro-Prudential Regulators and countries financial and monetary authorities. The purpose of Macro-Prudential Regulator is to make the global financial system stronger. It was represented by Financial Stability Forum (FSF) and International Monetary Fund (IMF) during the pre-global financial crisis.

The GFSB deliberate and deliver on most significant rules, best practices, core principles, and guidelines that are required to reduce fragility and market risk, based on the requirement from time to time. These bodies prepare guidelines for the various sectors such as a central bank, banking, securities market, insurance, and corporate sector.[200] Also, they work on the concerns of these sectors such as governance, accounting, capital adequacy, risk management, transparency, and payment and settlement. [201]After a thorough study of

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[198] Committee on the Global Financial System: mandate (As approved by the Governors of the G10 central banks on 8 February 1999) <https://www.bis.org/cgfs/mandate.htm> accessed 22-Feb-16.
[199] Ibid.
[200] Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' (n 188) 11.
[201] Ibid.

sector specific concern, they set and design principles and standards respectively.[202] These standards provide a minimum benchmark for all financial institutions which serve as a soft law in the form of guidance. The global financial supervisory bodies consist of international financial institutions,[203] global economic organization,[204] and global financial organizations which consist of standard setting regulators[205] and professional groups.[206]

- **Table B: The mandate of GFSB[207]**

Global Financial Supervisory Bodies	Mandate/ Goal
Basel Committee on Banking Supervision (BCBS)	Quality of banking supervision worldwide : capital adequacy and the core principles for effective banking supervision
Committee on the Global Financial System (CGFS)	Short-term monitoring of global financial system conditions, longer-term analysis of the functioning of financial markets, improving market functioning and promoting stability
Committee on Payments and Market Infrastructures (CPMI)	Promotes the safety and efficiency of payment, clearing, settlement and related arrangements
International Association of Deposit Insurers (IADI)	To enhance the effectiveness of deposit insurance systems
International Association of Insurance Supervisors (IAIS)	To promote effective and globally consistent regulation and supervision of the insurance industry
OECD's Financial Action Task Force (FATF)	To combat money laundering and terrorist financing
International Organization of Security Commissions (IOSCO)	Develops and promotes standards of securities regulation in order to maintain efficient and sound markets
The International Accounting Standards Board (IASB)	To achieve convergence, a single set of high quality, understandable and enforceable global accounting standards
Organization for Economic Cooperation and Development (OECD)	To achieve sustained economic growth and employment; encourages the convergence of policies, laws, and regulations covering financial markets and enterprises.

[202] FSB, 'Standard-Setting Bodies in the Compendium - Financial Stability Board' <http://www.fsb.org/what-we-do/about-the-compendium-of-standards/wssb/> accessed 22-Feb-16
[203] IFI include the IMF, World Bank and BIS.
[204] The OECD, The WTO, and the BIS
[205] The BCBS, IAIS and IOSCO.
[206] IASB and IFAC
[207] FSB, 'Standard-Setting Bodies in the Compendium - Financial Stability Board' <http://www.fsb.org/what-we-do/about-the-compendium-of-standards/wssb/> accessed 29-Jan-16.

International Organization of Pension Supervisors (IOPS)	Development and promotion of the implementation of international principles, standards, and good practices in pension supervision; the IOPS Secretariat is hosted by OECD
International Auditing and Assurance Standards Board (IAASB)	Develops auditing and assurance standards and guidance for use by all professional accountants under a shared standard-setting process involving the Public Interest Oversight Board (PIOB); it facilitated by the International Federation of Accountants (IFAC).

Source: ‘Standard-Setting Bodies in the Compendium - Financial Stability Board.

3.7.1. The International Association of Deposit Insurers (IADI): In the beginning, the IADI was the working group on ‘Deposit Insurance’ established by Financial Stability Forum (FSF) in 2000. The members of the working group got efforts underway to establish IADI in 2002 as a non-profit organization. It was instituted under Swiss Law and located at the Bank for International Settlements (BIS) in Basel.[208] The main objective was to maintain stability in the financial system by promoting global cooperation and coordination in the area of deposit insurance.[209] It provides guidelines for the ‘Core Principles for Effective Deposit Insurance System’.[210]

3.7.2. International Financial Reporting Standard (IFRS)

The IFRS Foundation and the IASB were established in 2001. The IFRS Foundation is formed based on the objective “to develop a single set of high quality, understandable enforceable and globally accepted financial reporting standards. These standards should compare information in financial statements and other financial reporting to help investors or stakeholders in the global financial regulatory system” (Article 2 Objective, IFRS Foundation, *Constitution*, page. 5).[211] The IASB (International Accounting Standards Board) is the independent standard-setting body of the IFRS.[212] Its mandate is to develop

[208] International Association of Deposit Insurers (IADI), ‘Annual Report’ (2010/2011) ii <http://www.iadi.org/wwwiadi/annual_reports/AnnualReport10_11.pdf> accessed 22-Feb-16.
[209] Ibid.4
[210] IADI, ‘Core Principles for Effective Deposit Insurance Systems’ <http://www.iadi.org/aboutIADI.aspx?id=105> accessed 22-Feb-16.
[211] IFRS Foundation, ‘Constitution Article 2 Objective’ (IFRS Foundation Publications Department 2013) 5
[212] The International Accounting Standards Board (IASB) is established as the successor organization to the International Accounting Standards Committee (IASC), formed in 1973.

International Financial Reporting Standards (IFRS). Further, IFRS Interpretations Committee (IFRIC) is the interpretative body of the IASB. Its mandate is to review on a timely basis the implementation matters that have occurred within the context of IFRS and to be responsible for recommendation and guidance (IFRICs).[213] Its mechanism is similar to national committees and follows a transparent, detailed and open due process.[214]

3.7.3. International Organization of Securities Commissions (IOSCO)

In 1983, the eleven securities supervisory bodies from North and South America made an agreement to institutionalize inter-American regional association to establish a global standard setting body entitled as International Organization of Securities Commissions (IOSCO), in which non-American group also joined. In the first annual conference (1986), the members decided to create a permanent general secretariat.[215]

The domestic securities markets are significantly integrated with the global financial market. This inter-connection of securities markets created cross dynamic instability at the domestic level as well as international level, where issues of investor protection needed to be addressed with the perspective of stability and certainty in the securities market. To address such concerns, IOSCO provided a forum for national securities regulators with the mandate to adhere with the internationally recognized standards. It closely works with other standing bodies for cross dynamic issues. The objective of IOSCO is : "[T]o developing, implementing and promoting adherence to internationally recognized standards; to protect investors, maintain fair, efficient and transparent markets, and seek to address systemic risks; to enhance investor protection and promote investor confidence in the integrity of securities markets through strengthened information exchange and cooperation in enforcement against misconduct (…)". The objectives of IOSCO are governed by the By-Laws (Part 1, Preamble, IOSCO By-Laws, page. 2).[216] Its Multilateral

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[213] IFRS, 'IFRS - Members of the IFRS Interpretations Committee' (formerly IFRIC) <http://www.ifrs.org/About-us/IASB/Members-of-IFRS-IC/Pages/Members-of-the-IFRS-IC.aspx> accessed 22-Feb-16.
[214] Ibid.
[215] OICV-IOSCO, 'About IOSCO' <https://www.iosco.org/about/?subsection=about_iosco> accessed 22-Feb-16.
[216] IOSCO By-Laws, 'Part 1, Preamble' , 2 <https://www.iosco.org/library/by_laws/pdf/IOSCO-By-Laws-Section-1-English.pdf> accessed 22-Feb-16.

Memorandum of Understanding (MMoU) is the benchmark for international cooperation among securities regulators.[217] Further, its membership expanded to more than 95% of the global capital market in around 115 jurisdictions.[218]

3.7.4. The International Association of Insurance Supervisors (IAIS)

It is a membership association of insurance supervisors and regulators set up in 1994.[219] The mission of the IAIS is to "promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets (…)"[220]. It provides a platform for exchanging information and sharing experience to strengthen GFRS. It encompassed around 210 Members from nearly 150 jurisdictions in 2014.[221] Their activities are supported by their Secretariat located in Basel and headed by a Secretary General.

3.7.5. International Federation of Accountants (IFAC)

The IFAC originated at the 11th World Congress of Accountants in Munich, Germany, on 7 October 1977.[222] The goal of the International Federation of Accountants is "to serve the public interest by contributing to the development, adoption and implementation of high-quality of international standards and guidance; contributing to the development of strong professional accountancy organizations and accounting firms, and by ensuring high-quality practices by professional accountants; promoting the value of professional accountants worldwide (…)" (Terms of Reference of IFAC, 1.0 Purpose).[223] Further, "[I]n following this goal, the IFAC Board has established the International Auditing and Assurance Standards Board (IAASB) to function as an independent standard-setting body and under

217 IOSCO By-Laws, 'Part 2, Members' , 4
218 'OICV-IOSCO - About IOSCO' <https://www.iosco.org/about/?subsection=about_iosco> accessed 29-Jan-16.
219 IAIS - International Association of Insurance Supervisors, 'About the IAIS' <http://iaisweb.org/index.cfm?event=getPage&nodeId=25181> accessed 29-Jan-16.
220 IAIS By-Laws, 'Article 2 Mission of the Association, I General provision' , 2 <http://iaisweb.org/index.cfm?event=getPage&nodeId=25208> accessed 29-Jan-16.
221 IAIS, 'IAIS from 1994 to 2014' (20th Anniversary) 2 <http://iaisweb.org/index.cfm?event=openFile&nodeId=34812http://iaisweb.org/index.cfm?event=openFile&nodeId=34812> accessed 29-Jan-16.
222 'History | IFAC' <http://www.ifac.org/about-ifac/organization-overview/history> accessed 29-Jan-16
223 'Terms of Reference of IFAC, 1.0 Purpose' <http://www.iaasb.org/about-iaasb/terms-reference> accessed 29-Jan-16.

the auspices of IFAC and subject to the oversight of the Public Interest Oversight Board (PIOB)". It is a Swiss registered association. Its vision is to develop accountancy profession recognized as a value leader in the development of strong and sustainable financial system. Its membership consists of over 130 countries, i.e., 175 associate representatives and comprises of around 2.84 million accountants.[224] It also maintains the following independent boards apart from IAASB: International Accounting Education Standards Board, International Ethics Standards Board for Accountants, and International Public Sector Accounting Standards Board. It encourages convergence to the standards issued by the International Financial Reporting Standards (IFRSs) set by the International Accounting Standards Board (IASB).[225]

- **The International Auditing and Assurance Standards Board (IAASB)**

The IAASB originated in 1978 and was known as the International Auditing Practices Committee (IAPC). Initially, it broadly focused on audits of financial statements, engagement letters, and general auditing guidelines. This guideline was codified as an International Standards on Auditing (ISAs) in 1991. The foundational work of IAPC was reconstructed as the International Auditing and Assurance Standards Board (IAASB) [226] in 2002. The IAASB's objective is to "[S]etting high-quality auditing, assurance, and other related standards and by facilitating the convergence of international and national auditing and assurance standards, thereby enhancing the quality and consistency of practice throughout the world and strengthening public confidence in the global auditing and assurance profession" (Terms of Reference of IAASB, 2.0 Objective).[227]

The IAASB follows a rigorous due process in developing its pronouncements. In this process, inputs are obtained from a wide range of stakeholders including the IAASB's Consultative Advisory Group, IFAC member bodies, and their members, regulatory and oversight bodies, firms, governmental agencies, investors, and the general public. After

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[224] IFAC, 'About IFAC' <http://www.ifac.org/about-ifac> accessed 29-Jan-16.
[225] IFAC, 'The board of the International Federation of Accountant, Statement of Membership Obligations (SMOs)' (November 2012) 4.
[226] International Federation of Accountants, 'An overview of the IAASB'S role and standard-setting process' (May 2011) <http://www.ifac.org/system/files/downloads/IAASB_Fact_Sheet.pdf> accessed 29-Jan-16
[227] Terms of Reference of IAASB, '2.0 Objective' <http://www.iaasb.org/about-iaasb/terms-reference> accessed 29-Jan-16.

due deliberation, the exposure drafts of proposed pronouncements are posted on the website and comments are invited. Then a final draft of pronouncements incorporating the comments received is prepared. The Public Interest Oversight Board (PIOB) oversees the work of the IAASB and its CAG to ensure that the IAASB follow due process and is accountable to the public at large.[228] The IAASB develops the following International Standards: (a) *International Standards on Auditing (ISAs)* and *International Standards on Review Engagements (ISREs);* (b) *International Standards on Assurance Engagements (ISAEs)*; (c) *International Standards on Related Services (ISRSs)*; and (d) *International Standards on Quality Control (ISQCs)* (Terms of Reference of IAASB, 3.0 Pronouncements).[229]

- **Public Interest Oversight Board (PIOB)[230]** was established in February 2005 to ensure that international auditing and assurance, ethics, and education standards for the accountancy profession are set in a transparent manner that reflects the public interest. It is an independent oversight board and oversees the IAASB, the International Accounting Education Standards Board (IAESB), the International Ethics Standards Board for Accountants (IESBA), and IFAC's Compliance Advisory Panel. The PIOB also oversees the respective Consultative Advisory Groups of the IAASB, IAESB, and IESBA.

- **Transnational Auditors Committee:** The Transnational Auditors Committee (TAC) serves as the official link between IFAC and the Forum of Firms (FoF).[231] It is broadly responsible for implementing the FoF's objectives and operations and plays a major role in encouraging members of the FoF to conduct high-quality international audits by

[228] 'About IAASB | IFAC' <http://www.iaasb.org/about-iaasb> accessed 30-Jan-16.
[229] Terms of Reference of IAASB, '3.0 Pronouncements' <http://www.iaasb.org/about-iaasb/terms-reference> accessed 30-Jan-16.
[230] Terms of Reference of IFAC, 1.0 Purpose**,** < http://www.iaasb.org/about-iaasb/terms-reference> accessed 30-Jan-16.
[231]The TAC also supports audit quality by: identifying audit practice issues and making recommendations to the appropriate standard-setting boards to review these issues as needed; facilitating interaction among transnational firms, international regulators, and financial institutions with regard to audit quality, systems of quality control, and transparency of international networks.

requiring the commitment to comply with certain international standards as a condition of membership.[232]

3.7.6. Organization for Economic Co-operation and Development (OECD)

George Catlett Marshall initiated the post-war European Aid Program commonly known as the Marshall Plan. It led to the creation of the Organization for European Economic Cooperation (OEEC) on 16 April 1948. It has continued to work on joint recovery programmes and particularly, supervises the distribution of aid. It carries out work on a global stage. Canada and US joined as OEEC members. The Organisation for Economic Co-operation and Development (OECD) was officially born on 30 September 1961. The members of the forum realized that the best way to ensure lasting peace was to encourage co-operation and reconstruction rather than penalize the defeated or rival.

The goals of the OECD policies encourages "to achieve the highest sustainable economic growth and employment and a rising standard of living in member countries, while maintaining financial stability, and thus to contribute to the development of the world economy; to contribute to sound economic expansion in member as well as non-member countries in the process of economic development (…)" (Article 1, OECD Convention).[233] The Article 2 (c), (d), and (e) of OECD has been built for strong global financial integration, where the members agree that they will : (c) "[P]ursue policies designed to achieve economic growth and internal and external financial stability and to avoid developments which might endanger their economies or those of other countries; (d) pursue their efforts to reduce or abolish obstacles to the exchange of goods and services and current payments and maintain and extend the liberalisation of capital movements; and (e) contribute to the economic development of both member and non-member countries in the process of economic development by appropriate means and, in particular, by the flow of capital to those countries, having regard to the importance of their economies of receiving

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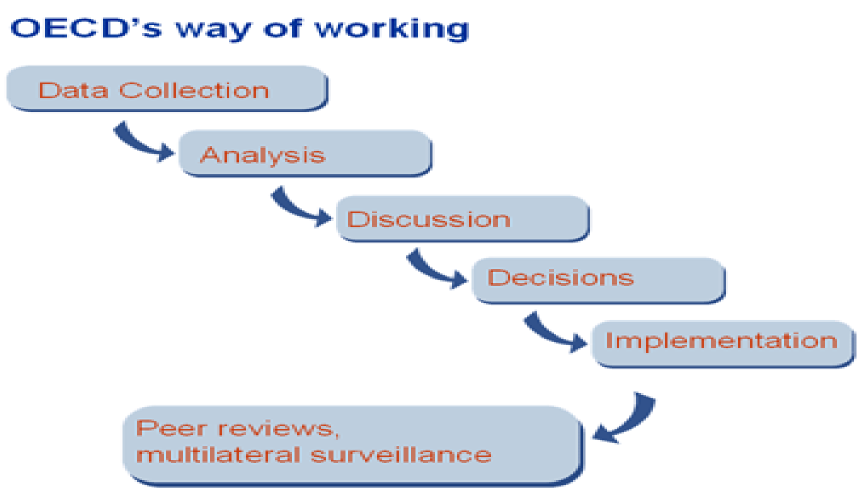
[232] 'Forum of Firms and Transnational Auditors Committee | IFAC' <https://www.ifac.org/about-ifac/forum-firms-and-transnational-auditors-committee> accessed 30-Jan-16.

[233] OECD Convention, 'Article 1' (Paris, 14 December, 1960) <http://www.oecd.org/general/conventionontheorganisationforeconomicco-operationanddevelopment.htm> accessed 30-Jan-16.

technical assistance and of securing expanding export markets" (Article 2 (c), (d), and (e) OECD Convention).[234]

OECD's work based on continued monitoring of events in member jurisdiction and non-member jurisdiction. That includes projections of short and medium term economic prosperity on a continuous basis. The Secretariat collects and analyses data, after which committees discuss policy regarding this information, the council makes a decision and which is followed by the implementation of the recommendation. This mechanism is detailed in the following figure VI.

Figure VI: OECD's way of Working[235]



The performance of individual countries is monitored through the multilateral surveillance and peer review process. It disseminates knowledge through regular publication such as the OECD Economic Outlook, OECD Factbook, OECD Economic Surveys and Going for Growth. The OECD accounts for around 80% of world trade and investment[236], i.e., 39

[234] OECD Convention, 'Article 2(c) , (d), and (e)' (Paris, 14 December 1960)
[235] OECD, 'What we do and how - OECD' <http://www.oecd.org/about/whatwedoandhow/> accessed 30-Jan-16.
[236] OECD, 'Better policies for better lives : The OECD at 50 and beyond' (2011) 10 <http://www.oecd.org/about/47747755.pdf> accessed 30-Jan-16.

Countries (including five non-members) to work on issues and challenges of the world economy.[237]

- **The Financial Action Task Force (FATF)**

The FATF was set up at the G-7 summit in Paris to build up the process to combat money laundering in July 1989. Its objective mandates are to set standards and promote effective implementation of regulatory steps for combating terrorist financing, money laundering, and other threats relating to the integrity of the global financial system. (Objective of the FATF, Mandate of FATF (2012-20), page. 2).[238] Moreover, it carries out various other tasks, than money laundering, such as "to examine measures designed to combat misuse of terrorism, financing and proliferation. It also assesses and monitors members through peer reviews and follow-up processes" (Function and tasks of the FATF, Mandate of FATF (2012-20), page. 2-3).[239]

3.8. The role of Financial Stability Forum (FSF) in GFRS

The President of the Bundesbank, Hans Tietmeyer prepared a report offering a framework for closer cooperation and coordination between many international financial regulatory bodies and existing international financial institutions to promote global financial stability and surveillance.[240] The G-7 accepted Tietmeyer's proposal[241] and set up the Financial Stability Forum (FSF) [242] in 1999.[243] The focus of FSF was to assess vulnerabilities affecting the global finance, to oversee action needed to address these vulnerabilities and

[237] Ibid. 8
[238] Objective of the FATF, 'Mandate of FATF (2012-20)' (Washington DC, 20 April 2012) 2 <http://www.fatf-gafi.org/media/fatf/documents/FINAL%20FATF%20MANDATE%202012-2020.pdf> accessed 30-Jan-16.
[239] Ibid. 2-3.
[240] Jason Liberi, 'The Financial Stability Forum: A Step in the Right Direction…Not Far Enough' (2014) 24(2) University of Pennsylvania Journal of International Economic Law , 5 <http://scholarship.law.upenn.edu/jil/vol24/iss2/5/> accessed 31-Jan-16.
[241] Hans Tietmeyer, 'Report on International Cooperation and Coordination in the Area of Financial Market Supervision and Surveillance' (Frankfurt: Deutsche Bundesbank, 1999) 1-4 ; See also, BIS Review, 'Report on International Cooperation and Coordination in the Area of Financial Market Supervision and Surveillance' (Hans Tietmeyer 11 February 1999) 1-6 <http://www.bis.org/review/r990225b.pdf> accessed 31-Jan-16.
[242] Mr. Andrew Crockett General Manager for the Bank of International Settlements (BIS) appointed as first chairman of the Forum for a period of three years.
[243] FSB, 'Our History - Financial Stability Board' <http://www.fsb.org/about/history/?page_moved=1> accessed 31-Jan-16.

to improve coordination among all stakeholders responsible for financial stability and sustainability.[244] For fulfilling these mandates, the forum meets twice a year. The stakeholders consist of the finance minister, central bank governor, and head of financial supervisory authorities of the G-7 countries, along with international standard setting bodies, international economic organization, and international financial institutions.[245] Its main representatives are from the IMF, World Bank, Bank for International Settlements (BIS), Organization for Economic Cooperation and Development ("OECD"), Basel Committee on Banking Supervision (BCBS), International Accounting Standards Board (IASB), International Association of Insurance Supervisors ("IAIS"), International Organization of Securities Commissions (IOSCO), Committee on Payment and Settlements Systems (CPSS), and Committee on the Global Financial System (CGFS).[246] Later on the European Central Bank, and additional national members Australia, Hong Kong, the Netherlands, and Switzerland also joined.[247]

FSF has created the opportunity to be the first Macro-Prudential Regulator in the true sense. The platform has brought together various international regulatory and supervisory bodies to act as a medium, an instrument of information exchange and policy formulation in a collaborative effort with the other stakeholders. Its organizational framework provides a forum to discuss a set of international standards and best practices among a variety of interested players in the global finance.

The FSF's Compendium of Standards (COS) provides a common reference to the various financial best practices that are globally accepted in stable and sound financial system. These have served an opportunity for financial authorities and market participants to access

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[244] Eric Helleiner, 'Global Financial Governance & Impact Report 2013: FSB' <http://www.new-rules.org/what-we-do/global-financial-governance-a-impact-report/fsb-governance-a-impact> accessed 20-Mar-16.
[245] BIS Review (n 242)
[246] Ibid.
[247] Stavros Gadinis, 'The Financial Stability Board: The New Politics of International Financial Regulation' (2013) Vol 48:157, Texas International Law Journal , 165 <http://scholarship.law.berkeley.edu/facpubs/2509> accessed 31-Jan-16; See also, Eric Helleiner, The Financial Stability Board and International Standards (CIGI G20 Papers, No. 1, June 2010) 20 <https://www.cigionline.org/sites/default/files/G20%20No%201_2.pdf> accessed 31-Jan-16.

the complete standards, supporting documents and assessment techniques.[248] It has also formed working groups to identify and address most immediate and specific issues in global finance. The advantage of this group is that it contains few members as compared to a forum respresented by larger membership where it is difficult for consensus to take place efficiently.[249] The working group prepares a report and presents to the forum for their decision. Initially, the highly leveraged institutions, capital flows and exchange rate regimes, and offshore financial centers working group were set up in 1999.[250]

3.8.1. The FSF's Efforts before the Global Financial Crisis

The FSF began its efforts to streamline the global financial regulatory system in the backdrop of various crisis that occurred in the 1990's. It worked as a strong Macro-Prudential Regulator to harmonize global financial regulation with better coordination and cooperation, both within the national and international jurisdictions. Its Compendium of Standards (COS) comprised sixty-four[251] standards that sought to harmonize international financial regulation. However, the implementation of these sixty-four standards proved to be a difficult task and so a 'Twelve Key Standards'[252] was developed for most important priority in implementation such as the IMF's Code of Good Practices on Fiscal Transparency, the IASB's International Accounting Standards, and IOSCO's Objectives and Principles of Securities Regulation. This standard takes care of sectoral (e.g., banking) approach, functional (e.g., regulation and supervision) approach, and including the principles of basel norm (e.g., Basel Committee's Core Principles for Effective Banking Supervision), practices (e.g., Basel Committee's Sound Practices for Loan Accounting), and methodologies and guidelines (e.g., implementation guidance).[253]

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[248] Reserve Bank of India, 'Report of the Technical Group on Market Integrity' (4 June 2002) 4 <https://www.rbi.org.in/scripts/PublicationReportDetails.aspx?ID=280> accessed accessed 31-Jan-16.
[249] Ibid.
[250] DPM Lee Hsien Loong, 'Towards Sounder International Finance' (Monetary Authority of Singapore, 30 August 1999) <http://www.mas.gov.sg/news-and-publications/speeches-and-monetary-policy-statements/speeches/1999/towards-sounder-international-finance--29-aug-1999.aspx> accessed 31-Jan-16.
[251] Financial Stability Forum, 'Issues Paper of the Task Force on Implementation of Standards' (25 March 2000) 21 <http://www.fsb.org/wp-content/uploads/r_0003.pdf> accessed 31-Jan-16.
[252] Y.V. Reddy, 'Issues in Implementing International Financial Standards and Codes' (Centre for Banking Studies of the Central Bank of Sri Lanka, Colombo, 28 June 2001) <https://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=81> accessed 31-Jan-16.
[253] Ibid.

The COS were inconsistent and not regularly updated.[254] It also lacked implementation because the member countries were ultimately responsible for the implementation standards. On the other side, the three working groups published reports on limited areas or issues. There was also the difficulty to come to an agreement on tough issues. It also faced shortcomings in pointing out the substantial future work that needed to be done. The implementation task force was focusing on execution of standards and best practices, but it did not figure out impact fully. The FSF could not implement standards into practice and failed to learn a lesson from the 1990's financial failure.[255]

3.8.2. The Role of FSF's in Mitigating the Global Financial Crisis

The FSF organized various meetings to discuss and deliberate the serious concerns of the financial turmoil and required to take necessary policy steps for establishing stability and sustainability in the global financial system.[256] It initiated various working groups with specific mandates to address issues and give their recommendations and suggestions. It developed a follow-up mechanism for implementation of their guidelines in a timely manner.

- **The FSF's September 2007 Meeting**

In the New York meeting, the FSF took immediate steps for stabilizing the world economy.[257] It formed the Working Group on Market and Institutional Resilience to investigate the root causes of the financial turmoil and make a proposal to enhance market stability and resilience.[258] The Group comprised of expert representatives of the BCBS,

[254] Rolf H. Weber and Douglas W. Arner (n 53) 417.
[255] IMF Monetary and Capital Markets Department, 'Bosnia and Herzegovina: Financial Sector Assessment Program Technical Note—Systemic Liquidity Management, Financial Safety Net, Insolvency Framework, and Macroprudential Policy' (International Monetary Fund 2015) 5.
[256]Press release: Financial Stability Forum meets in New York' (27-Sep-07) <https://www.bis.org/press/p070927.htm> accessed 31-Jan-16.
[257]Press release: Financial Stability Forum meets in New York' (27-Sep-07) <https://www.bis.org/press/p070927.htm> accessed 31-Jan-16.
[258] Ibid.

IOSCO, IASB, CPSS, CGFS, IMF, BIS, Joint Forum, and European Central Bank, along with national regulators in key financial centers and private sector market participants.[259]

The FSF Working Group's Preliminary Report in October 2007 noted that since June 2007, a reduction in risk taking, re-pricing, and a liquidity squeeze adversely affected the global financial system. It was evident that the US subprime mortgage market and interrelated structured products were the triggers of the crisis that was affecting a wide range of markets, including the broader market for structured credit products, the leveraged loan markets, commercial paper and interbank funding markets. [260] The crisis had spread due to additional other reasons like rating downgrades of mortgage-backed securities, a lack of confidence in rating and valuation of other structured credit, and the drop in funding for many asset-backed commercial paper conduits.[261] The Working Group developed recommendations by focusing on risk management practices, valuation, risk disclosure, accounting, the role of credit rating agencies, and principles of prudential oversight.

- **The FSF's Interim Report in February 2008**[262]

The report focused on the following three sections.

First, the prevailing conditions and adjustments in the financial system would likely be prolonged. That is why, fast relief was required in the form of short-term action, thus, the Interim Report recommendations were realistic asset pricing, adequate market liquidity and credit intermediation, and providing confidence to markets. Also, the financial regulators were required to continue to work closely with individual financial institutions to ensure adequate levels of capital and liquidity.

Second, the Interim Report preliminarily identified well-known factors which contributed to the sub-prime crisis, ranging from fraudulent practices in the US mortgage market to

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[259] 'Press release: Financial Stability Forum Recommends Actions to Enhance Market and Institutional Resilience' (12-Apr-08) <http://www.bis.org/press/p080412.htm> accessed 31-Jan-16.
[260] Julio Faundez and Celine Tan, *International Economic Law, Globalization and Developing Countries* (Edward Elgar Publishing Limited 2010) 103.
[261] Ibid.
[262] FSF, 'Working Group on Market and Institutional Resilience - Interim Report' (5 February 2008) 1-8 <http://www.fsb.org/wp-content/uploads/r_0802.pdf> accessed 31-Jan-16.

poor disclosure by financial firms, and risks associated with their off-balance sheet exposures.[263] It suggested that the regulatory efforts should focus on ensuring resilience when markets come under stress. Furthermore, it was suggested that the regulators should consider expanding the scope of regulatory coverage in the event of market failure. Additional regulations can be reasonable to regulatory arbitrage or address moral hazard when prevailing regulation stretched too far from the result.

Finally, the report described policy measures agreed upon by the Working Group on the basis of the April report. The Working Group addressed that the supervisory lapse and oversight must be overcome and day to day monitoring of capital arrangements, liquidity buffers, risk management practices, and off balance sheet activated. Furthermore, strengthening of the 'originate- to-distribute model', market transparency, accountability of credit rating agencies, and regulatory abilities was required to respond to the crises.

- **The FSF's April 2008 Report**[264]

The report identified the major causes of the crisis[265] and proposed concrete measures: "strengthened prudential oversight of capital, liquidity and risk management, robust arrangements for dealing with stress, authorities' responsiveness to risks (…)".[266]

The April 2008 Report proposed a number of recommendations on the concerned areas, such as, (1) strengthening prudential oversight of capital management, by raising Basel II capital requirements for certain complex structured credit products; (2) increasing

[263] Ibid. 4.
[264] Financial Stability Forum, 'Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience' (7 April 2008) <http://www.fsb.org/wp-content/uploads/r_0804.pdf?page_moved=1> accessed 31-Jan-16.
[265] "reasons of global financial crisis notified in the report, which include : low real interest rates and high liquidity, which increased willingness to take on risk and leverage; financial innovations such as collateralized debt obligations (CDOs) that increased the system's ability to generate credit assets and leverage faster than risks could be managed; the use of credit default swaps and other tools to trade and hedge credit risk; banks' establishment of off-balance sheet funding and investment vehicles backed by mortgage-backed securities (MBS); the loosening of credit standards for mortgages and other loans and the miscalculation of risk by banks and rating agencies; contraction of the interbank market following freezes in the asset-backed commercial paper (ABCP) and structured investment vehicle (SIV) markets; failure of investors to perform due diligence; failure of credit rating agencies to rate structured products adequately; distortions in incentive; lack of disclosure; and weak regulatory frameworks".
[266] Ibid, 2.

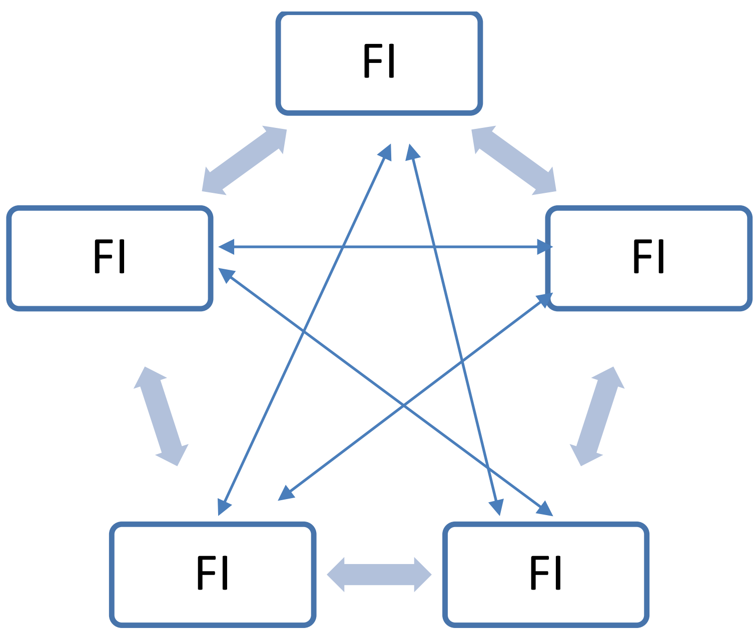
accountability of CRAs: implementation of the revised IOSCO Code of Conduct Fundamentals of CRAs to manage conflicts of interest; (3) strengthening authorized responsiveness to risks: Formation of supervisory colleges by end of 2008.

- **Follow-Up Reports in October 2008**

A substantial volume of work was underway to implement the recommendation of FSF's April 2008 report.[267] With regard to the development of the market, there was an immediate requirement to implement recommendations on central counterparty clearing for the over-the-counter (OTC) credit derivatives, which would harmonize instrument valuation. Also work was required on sources of mitigation of pro-cyclicality in the financial system and reassessment of unregulated financial institutions, instruments, and markets in the global financial system.

Figure VII: OTC versus Central Clearing House[268]

VII.A. OTC Chart



[267] Financial Stability Forum, 'Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience' (2 April 2009) <http://www.fsb.org/wp-content/uploads/r_0904d.pdf?page_moved=1> accessed 31-Jan-16; See also, Julio Faundez and Celine Tan (n 255) 105.

[268] Viral Acharya and others, 'Derivatives – The Ultimate Financial Innovation (Ch 10)' in Viral Acharya and Matt Richardson (ed), *From Restoring Financial Stability: How to Repair a Failed System* (Wiley 2009) 13 <http://pages.stern.nyu.edu/~mbrenner/research/derivatives.pdf> accessed 1-Feb-16.

VII.B. Central Clearing House

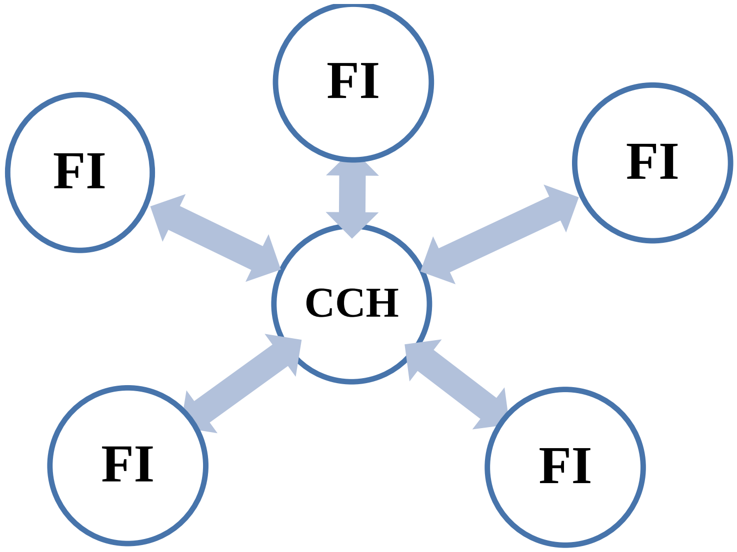


Figure VII.A describes the interaction of six financial institutions in an OTC market.[269] There is a total of 15 possible bilateral transactions that take place to clear the outstanding. It is impossible for a counterparty to know the overall credit risk of the other counterparty during trading process. There is a possibility that the transaction between other counterparties might put the system at risk. It is clear from the figure VII.A that OTC market had grown sufficiently large, and it was required to be shifted to Clearing House and Centralized Exchange Market. With the due procedure of adequate collateral and margin requirements, this framework addresses the concern of counterparty credit risk which is explained in Figure VII.B. In figure VII.B describes the structure of clearing house where there are six transactions occurred and each counterparty had a common intermediary, i.e. the centralized clearing house.[270] The OTC market was streamlined by FSF in the backdrop of the financial crisis (2007-08).

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[269] Ibid. 10.
[270] Ibid. 8.

- **FSF issued update in April 2009**

The G-20's London Summit[271] noted that considerable progress had been made in the implementation of the recommendations, such as, Basel II published proposals for improving risk coverage about credit-related risks in the trading book. Also, they revised capital adequacy for off-balance sheet and re-securitized instruments. The central counterparty clearing for OTC credit derivatives had been launched in the US and Europe. Furthermore, the CRAs substantially implemented the 2008 revisions of IOSCO's Code of Conduct Fundamental for CRAs, and the supervisory colleges have been established for most of the global financial institutions.

3.8.3. FSF: Issues and Challenges

It was quite evident that the FSF goal was to create a single, unified body of international financial regulation. Yet, FSF was lacking wider membership, and it was difficult to implement standards when non-members did not participate voluntarily or otherwise. It started the journey without including developing or emerging economies and other important stakeholders other than G-7 countries. Though they had a mechanism of working groups where the concerns of excluded stakeholders could be addressed. Yet, it lacked a formal representation like G-7 countries. This issue was brought to the Chairman F, Andrew Crockett, following a presentation to the United Nations in May 2000: "*Representatives of Southern governments followed each other in raising queries and concerns. Kenya began with concern about the exclusion of African states, particularly the LDCs, from membership in the FSF. The representative from Cuba followed through by informing the speaker of the declaration made by country representatives at the South Forum (2000) of their refusal to implement any international standard or measure arrived at without their meaningful participation".*[272] "Mr. Crockett responded to the comments that the Forum would be more efficient if membership and policy ideas were rather

[271]Financial Stability Forum, 'Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience', Update on Implementation (2 April 2009) < http://www.fsb.org/wp-content/uploads/r_0904d.pdf?page_moved=1> accessed 31-Jan-16.
[272] Jason Liberi (n 241) 25.

homogeneous.[273] However, due to homogeneous membership and policy formulation valid goals, the standards that will be promulgated by the Forum are expected to be adopted globally?"

The COS were inconsistent and not regularly updated.[274] It also lacked implementation because the member countries were ultimately responsible for the implementation of standards. On the other side, the three working groups published reports on limited areas or issues and difficulty was faced to come to an agreement on tough issues. It also faced shortcoming in pointing out substantial future work that needed to be done. The implementation task force was focusing on execution of standards and best practices, but it did not figure out prominently. The FSF could not implement standards into practice and failed to learn a lesson from the 1990's financial failure.[275]

4. Summary

The global financial regulatory system (GFRS) is the forum of micro-prudential regulators and macro-prudential regulators. The stability and health of the international financial system are the objectives of micro-prudential regulation. However, due to complexity in the international financial system as a whole, the focus on micro-prudential regulation needs to complement with macro-prudential regulation, aimed at increasing the resilience and interconnectedness in the financial system as a whole.

The global standard setting bodies (GSSB) (BCBS, CPMI, IOSCO etc.) and national financial authorities have revealed concern for global financial integration in the absence of a streamlined GFRS. The GSSB does not function based on the legal mandate; it serves as a forum for discussion amongst national financial authority, international financial institutions, and other standard setting bodies. It leaves the discretion and resilience of national jurisdictions to implement global financial regulation with in their respective

[273] "Mr. Crockett responded to the question: In defense of exclusivity of membership in the FSF to industrialized and some key emerging economies, he opined: "We need to focus on best practice, not average practice." Still very much preoccupied with nothing but dealing with 'best' practices and solutions, he threw a challenge to the body by asking how expansion in membership could be undertaken without creating a demand for everyone-including those with average and bad practices - to also want to join".
[274] Rolf H. Weber and Douglas W. Arner (n 53) 417.
[275] IMF Monetary and Capital Markets Department (n 250) 5.

national financial system. However, these regulation are non-binding in a legal sense but due to global market incentive and efficiency enhancing role in domestic financial system, the member nations voluntarily comply and implement international standards, despite the fact that international financial soft law in nature.

The jurisprudence of GFRS is based on the doctrine of democratic and equitable international economic order. It endorses the principles of universality, indivisibility, interrelatedness, and mutually reinforcing nature of all civil, cultural, economic, political, and social rights, including the right to development. The main objective of GFRS is to provide a forum for equal participation in the decision-making process, interdependence, mutual interest, solidarity and cooperation among all states.

The GFRS began informally after the establishment of the Bank for International Settlement (BIS) under the Hague Agreements of 1930. It was established in the context of the Young Plan, which dealt with the issue of reparation payments imposed on Germany by the Treaty of Versailles. Though, the global financial integration was in a primitive stage during that period, however, after the end of Second World War, the world economy was looking for a strong GFRS. The United Nations Monetary and Financial Conference on 1944 was the first footprint in the development of GFRS in the area of global financial interconnection. The architectures of Bretton Woods, John Maynard Keynes and Harry Dexter White, pioneered the restructuring of GFRS blueprint where IMF was to look after global monetary and financial cooperation among government as a Macro-Prudential Regulator, whereas the purpose of International Bank for Reconstruction and Development (IBRD) was for reconstruction and development.

In 1971, the Bretton Woods system collapsed, after closing the gold window and abandoning the fixed link between the US dollar and gold, known as the Nixon Shock. Under the second amendment in the IMF Articles of Agreement, IMF financially supported those countries which were facing periodic exchange crises. This support was based on a range of conditions such as liberalization, privatization, and international financial integration.

Under Article IV of the IMF Articles of Agreement, the Fund staff consults financial authorities of each member country to review economic policies and development. This is known as Structural Adjustment where member nation takes necessary steps towards financial reforms, major tax reform and encouraging and supporting capital account liberalization. The Financial Stability Assessment Program (FSAP) was an instrument of the IMF surveillance, conducted jointly by IMF and World Bank to assess financial stability and financial development, comprehensively applying instruments of stress test of banking, capital market, insurance or financial system as a whole. Despite all of this, IMF was sidelined in the Plaza agreement (1985) and the Lourve accord (1987). IMF was losing ground as a macro-prudential regulator and the seed of FSF (current FSB) was sown as a Macro-Prudential regulator as an alternative of IMF.

The objective of IBRD is to enhance the overall health and environment of world economy as a Micro-Prudential Regulator. World Bank sisters' institutions IBRD, IFC, IDA, MIGA and ICSID have been developed to institutionalize global financial interlinkage by promoting cross-border financial aids, foreign investment, investment assurances, and the resolution of cross-border investment disputes. These developments have encouraged global financial integration in LDCs and Developing Countries.

Trade and finance are two sides of the same coin. When the country's trade account is in deficit, it signifies that domestic finance is not adequate, so the net result is capital inflow in trade deficit country from trade surplus country. This show that trade and finance are significantly interlinked and integrated in GFRS. The WTO (previous GATT) addressed issues of leakages and bottleneck related to trade dispute and enhanced international trade. The volume of trade has increased, and correspondingly global financial integration has also increased from 1994 onwards. However, there exist inefficiency and regulatory gap in international finance which need to be streamlined in accordance with international trade regulation.

UN associated institutions, ECOSOC, UNCTAD, and MDG have provided a platform to stakeholders to raise questions or discuss/debate issued related to GFRS. However, on the ground, UN bodies have a limited role in GFRS.

BIS acts as an agent or correspondent of central bank member and provides a platform to central banks authority to coordinate and collaborate with subjects related to global financial system's continuous transformation. BIS plays an important role in hosting and providing a base to Micro-Prudential Regulators, such as BCBS, CPMI, CGFS, IAIS, IADI, and FSB. The bankruptcy of major banks Hertatt Bankhaus (West Germany), British-Israel Bank of London (Britain), Franklin National Bank (US) brought GFRS into limelight and need to enhance global banking regulation was highlighted, which resulted into setting up of the Committee on Banking Regulation and Supervision (Basel Committee) in 1974. The Basel Committee developed norms to mitigate the systemic risks of banking failure and provide fair and competitive environment for cross-border jurisdiction. The Global Financial Supervisory Bodies (GFSB) such as IADI, IFRS, IOSCO, IAIS, IFAC and IAASB, focused on developing Micro-Prudential Regulation in the global financial system. These bodies prepare guidelines for the various sectors such as insurance market, banking sector, securities market and corporate sector as per the dynamic change in GFRS.

The OECD policies encourage co-operation and reconstruction in the world economy to ensure lasting peace and harmony. As per Article 2 (d) OECD Convention, efforts are pursued to reduce obstacles to the exchange of goods and services and current payments and extend the liberalization of capital movement, which has enhanced the overall global financial integration. In the backdrop of an increase in global financial openness, there occurred a series of regional crises in Asia, Latin America, and Russia in 1997-1998 which resulted in the establishment of Financial Stability Forum (FSF). FSF provided a mechanism for closer cooperation and coordination between many international financial regulatory bodies and existing international financial institutions to promote global financial stability and surveillance as a Macro-Prudential Regulator. It provided an opportunity to Micro-Prudential Regulators and Macro-Prudential Regulators to discuss a set of international standards and best practices among important stakeholders in the global finance. However, the FSF lacked wider membership. The creation of FSF was not subject to states enactment. It was an informal association of G-7 countries representatives without an official legal mandate. The presence of FSF was absolutely insignificant during the global financial crisis, infact it was the IMF and World Bank stimulus package that helped the world economy to recover from GFC.

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6. Restructuring of Global Financial Regulatory System in the conditions of Global Financial Integration: Post Global Financial Crisis

- ***In the backdrop of global financial integration there is need for strong global financial regulatory mechanism.***

SCHEME OF THE CHAPTER

1. Restructuring the GFRS: Post Global Financial Crisis

The global financial crisis that began in 2007 intensified in 2008, with the collapse of Lehman Brothers Bank. The GFC demonstrated serious lacuna in global financial regulation. The crisis was not only restricted to the US but also intensely spread from one nation to systematically important regions, and finally became contagious worldwide.[1] The reforms in GFRS started to enhance the monitoring of systemic stability and to strengthen the relations between Macro and Micro-Prudential Regulation.[2] At the global level, coordination initially took place through the G-7 countries and at the institutional level, through the FSF to the major stakeholders. However, the post-financial crisis institutional framework changed from G7/FSF to G20/FSB[3] in G20 London (2009) summit. The FSB has laid strong foundation of the global financial regulatory mechanism.

1.1. Emergence of Financial Stability Board (FSB) in GFRS

The process of development of FSF was gradual and continuous till it reached maturity in the international financial organization. It firstly broadened the membership to G-20 countries, where financial authorities of developing or emerging countries were included. Further, in G-20 summits such as, Washington, D.C. (in 2008), London (in 2009)[4] and Pittsburgh (in 2009),[5] it tested the regulatory leakages. The FSF has matured into the Financial Stability Board which emerged as the first comprehensive Global Macro-Prudential Regulator.

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[1] Douglas W Arner and Ross P Buckley, 'Redesigning the Architecture of the Global Financial System' (2010) Vol 11 No 2 Melbourne Journal of International Law, 2 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1758470> accessed 23 January 2016.

[2] Ibid, 22.

[3] 'G20 London Summit Global Plan for Recovery and Reform' (Statement Issued by the G20 Leaders London, April 2, 2009) <http://www.g20.utoronto.ca/2009/2009communique0402.html> accessed 01-Feb-16.

[4] Ngaire Woods , Shrinking from Duty? Tasking the International Financial Institutions,in Andrew F. Cooper and Daniel Schwanen (eds), *CIGI Special G20 Report: Flashpoints for the Pittsburgh Summit* (CIGI, September 24-25, 2009) 21.

[5] Andrew F. Cooper and Daniel Schwanen, 'Introduction and Summary of Recommendations' in Andrew F. Cooper and Daniel Schwanen (eds), *CIGI Special G20 Report: Flashpoints for the Pittsburgh Summit* (CIGI, September 24-25, 2009) 9.

1.1.1. The First G20 Heads of Government Level Summit on 15th November 2008 (Washington, D.C.)

The first G-20 Washington summit undertook exercise on structural reform in the global financial regulatory system.[6] This was also known as "Bretton Woods II" [7] where agreed to take immediate steps[8] to normalize the financial system such as fiscal stimulus to encourage domestic demand, vis-à-vis implementation of the core principles of finance, i.e., accountability and transparency, prudential regulation, integrity, international cooperation, and coordination.[9] The Washington summit discussed the role and importance of IMF and FSF as the Macro-Prudential Regulators. It was decided to conduct 'early warning exercises'[10] to assess macro-financial risks and systemic vulnerabilities. By the end of the exercise, joint risk assessment reports will be provided.[11] The problem of liquidity will be addressed by the IMF, the World Bank Group and other Multilateral Development Bank (MDB). Further, IMF and other international organizations will continue to provide necessary capacity building programme for the emerging and developing economies to implement the global regulatory standards.[12]

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[6] G-20 Washington Summit, Declaration Summit on Financial Markets and the World Economy (November 15, 2008) 1.

[7] Joseph J Norton, 'NIFA-II or 'Bretton Woods-II'?: The G-20 (Leaders) summit process on managing global financial markets and the world economy – quo vadis?' (2010) Vol. 11, 4 *Journal of Banking Regulation*, 289 <http://www.palgrave-journals.com/jbr/journal/v11/n4/full/jbr201017a.html> accessed 2 February 2016.

[8] 'G20 India Secretariat, History and Past Presidencies' <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> accessed 02-Feb-16.

See Mark Landler, Challenges, Rather than Solutions, at Summit; Thorny Questions Are Left for Obama After G-20 Talks, INT'L HERALD TRIB., Nov. 17, 2008, at 1.

[9] G20 Declaration, above n 105, 4.

[10] G-20 Washington Summit, Declaration Summit on Financial Markets and the World Economy (November 15, 2008) 10.

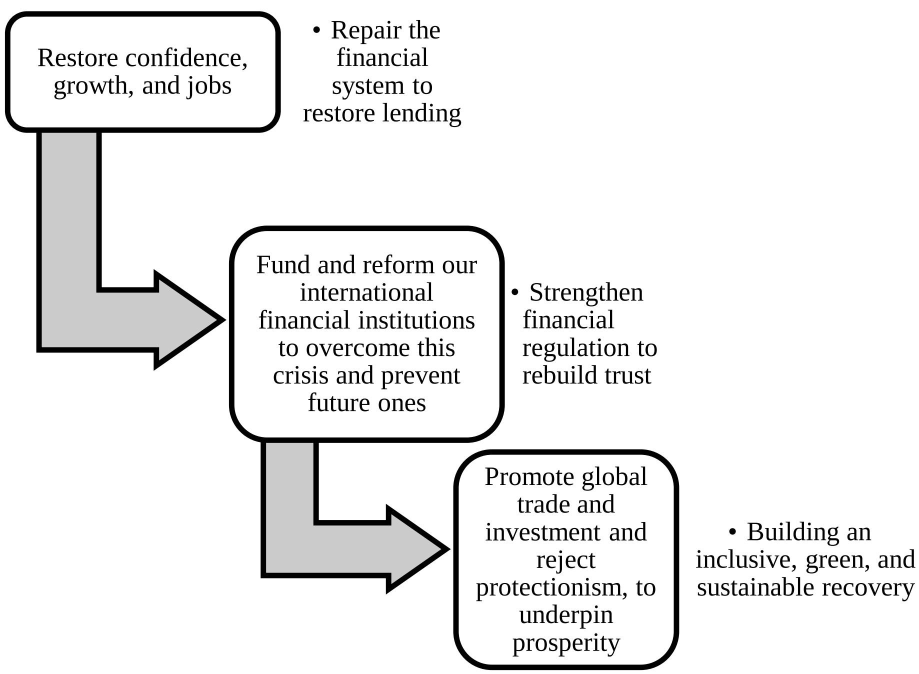
[11] Letter from FSF Chairman, Dominique Strauss Kahn and IMF Managing Dir. & Mario Draghi, to G-20 Ministers and Governors (November 13, 2008) <http://www.fsb.org/wp-content/uploads/r_081113.pdf?page_moved=1> accessed 2 February 2016

[12] G-20 Washington Summit (n 10) 5.

1.1.2. The Second G20 Heads of Government Level Summit on April 2, 2009 (London Summit) [13]

U.K. Prime Minister Gordon Brown, at the beginning of the summit, stated that the summit would launch a "grand negotiation" among countries that would help end the global recession and set in motion reforms that would prevent future crises.[14] Whereas, the United States and Europe in excess of additional stimulus measures had lowered their expectations from structural reform. The leaders of G-20 promised to implement the following broad guidelines as described in the figure I to prevent such crisis in the future.[15]

Figure I: London Summit broad guidelines to prevent crisis in Future[16]



[13]G-20 London Summit, Declaration on Strengthening the Financial System (2 April 2009) 1-6 <http://www.fsb.org/wp-content/uploads/london_summit_declaration_on_str_financial_system.pdf> accessed 3 February 2016.
[14]Norton (n 7) 284.
[15]G-20 London Summit – Leaders' Statement (2 April 2009) 1 <http://www.g20india.gov.in/pdfs/Link-5-Leaders-Declaration-Second-Summit.pdf> accessed 3 February 2016.
[16]G-20 London Summit – Leaders' Statement (2 April 2009) 1 <http://www.g20india.gov.in/pdfs/Link-5-Leaders-Declaration-Second-Summit.pdf> accessed 3 February 2016.

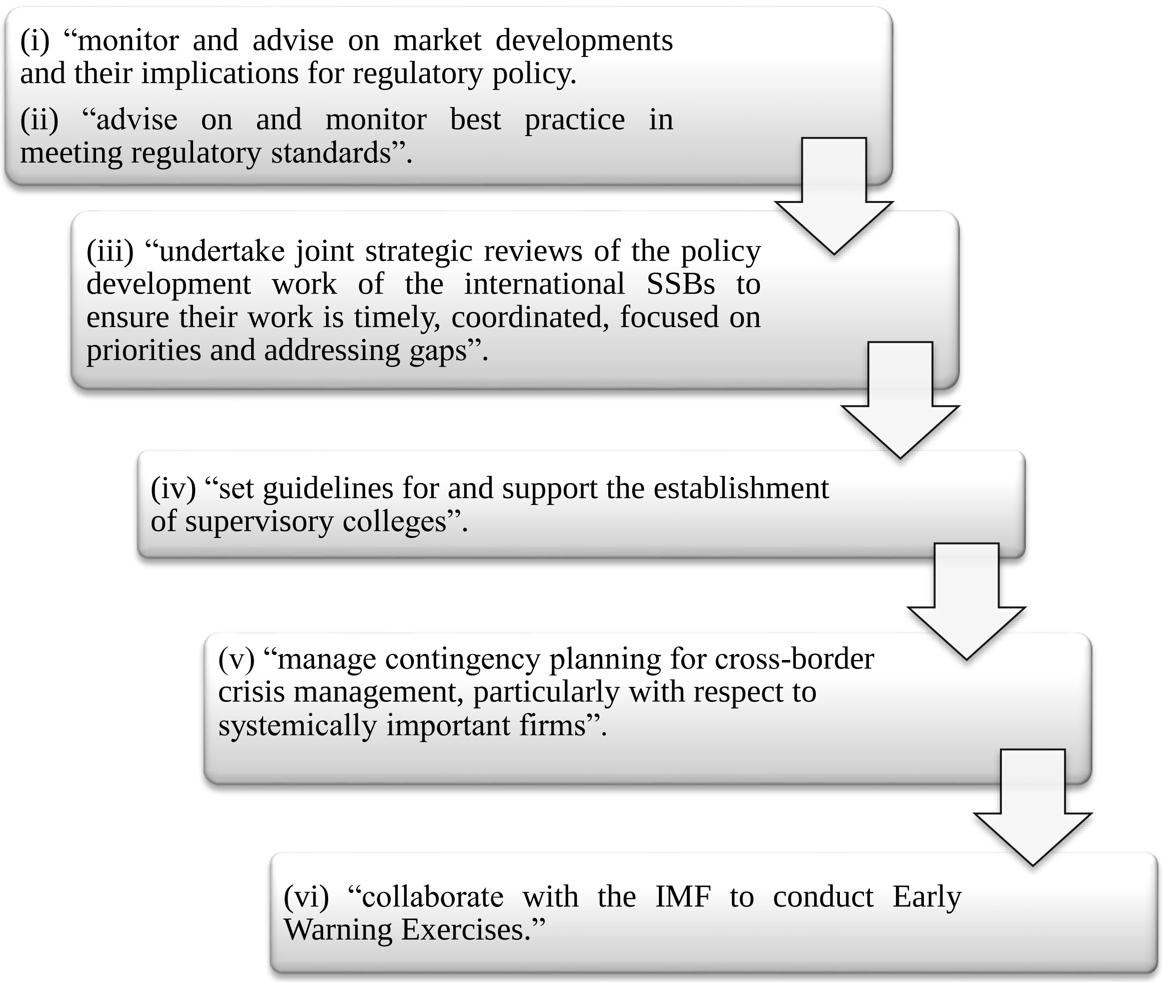
In normalizing the global financial system, the G-20 requested the global financial institutions to provide US $1.1 trillion to overcome the counter-cyclical effect, bank recapitalization, balance of payment support etc.[17] That was followed-up by IMF through immediate financing from members of $250 billion, subsequently incorporated into an expanded and more flexible New Arrangements to Borrow scheme which increased by up to $500 billion, an additional support of $250 billion came from agreed IMF gold sales for concessional finance and increase in lending of $100 billion by the Multilateral Development Banks (MDBs).[18]

The London Summit led to the establishing of a Financial Stability Board (FSB) as a successor to the FSF.[19] The FSB was designed to develop stronger institutional setup so that it could efficiently collaborate with national financial authority, standard setting bodies (SSB) and international financial institutions (IFI) in addressing vulnerabilities and market risk. For the institutional setup, the FSB would consist of a Chairperson, a Steering Committee, the Plenary, SSBs, IFIs and a Secretariat.[20] The Plenary is the decision-making organ and the Steering Committee is an executive organ. The membership includes the current FSF members plus rest of the G-20, Spain, and the European Commission. FSB would pursue for implementing international financial standards, periodic peer reviews, accountability and transparency of financial sector.[21] It will also work on complex issues such tax havens and non-cooperative jurisdictions.[22]

[17]'G20 India Secretariat, History and Past Presidencies' <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> accessed 02-Feb-16.
[18] Ibid
[19] G-20 London Summit, Declaration on Strengthening the Financial System (2 April 2009) 1 <http://www.fsb.org/wp-content/uploads/london_summit_declaration_on_str_financial_system.pdf> accessed 3 February 2016.
[20] Rolf H. Weber and Dominic N. Staiger, 'Financial Stability Board: Mandate and Implementation of Its Systemic Risks Standards' (2014*) International Journal of Financial Studies,* 86 <http://www.mdpi.com/2227-7072/2/1/82/htm> accessed 3 February 2016.
[21]G-20 London Summit, Declaration on Strengthening the Financial System (n 19) 1.
[22] Ibid, 4.

The FSB's term of office is reflected as per the following roadmap:

Figure II: Mandates of FSB[23]



To promote the broader mandate, the FSB Plenary established the following Standing Committees: (i) Vulnerabilities Assessment,[24] (ii) Supervisory and Regulatory Cooperation (including for supervisory colleges and cross-border crisis management), and (iii) Implementation of Standards and Codes. It may establish other Standing Committees and ad-hoc working groups, which can include non-FSB member countries, as necessary.

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[23] Ibid, 4.

[24] Press Release, Financial Stability Board: Inaugural Meeting of the Financial Stability Board, Basel (26-27 June 2009) 1 <http://www.fsb.org/wp-content/uploads/pr_090627.pdf> accessed 03-Feb-16.

The FSB will play an integral role in strengthening the global financial system in the context of global financial integration implementing, prudential regulations and broadening the scope of the rules. It had an inaugural meeting on 26-27 June 2009[25] in Basel. Overall, the London declaration provided the framework for the international financial regulation. The next stage of reform and follow-up took place in the Pittsburg summit in September 2009.[26]

1.1.3. The Third G20 Heads of Government Level Summit on 4 September 2009 (Pittsburgh Summit)[27]

The reform in IMF quota was their shift in focus from over-represented countries to under-represented countries reflected by making available around 5% additional quota to emerging countries. It will provide $500 billion with expanded IMF New Arrangements to Borrow (NAB). It has made SDR allocations of $283 billion in total, more than $100 billion of which will supplement developing countries' existing reserve assets. It generated resources from the sale of IMF gold and other funds.[28] Further, its composition of the executive board, fund governors, and staff was appointed on fair, and merit-based process where diversity was enhanced and this condition applied to all international institutions. The World Bank adopted a dynamic formula for economies both evolving and developing. It increased 3% of voting power for developing and transition countries.[29]

The main objective of Pittsburgh Summit was to achieve Strong, Sustainable and Balanced Growth in the global economy.[30] To achieve this aim, the IMF was to assist on Macro-prudential Frameworks and the World Bank in developmental aspect and poverty reduction. The IMF will also support Financial Authorities in the process of mutual assessment by developing a forward-looking analysis, and the financial authorities' will

[25] Ibid, 1.
[26] Daniel E. Nolle, 'Who's in Charge of Fixing the World's Financial System? The Un[?]der-Appreciated Lead Role of the G20 and the FSB' (2015) Volume 24, Issue 1, *Financial Markets, Institutions & Instruments*, 22 <http://onlinelibrary.wiley.com/doi/10.1111/fmii.12023/full> accessed 03 February, 2016
[27] G20 India Secretariat (n 17).
[28] The Third G-20 Summit, 'Leaders Statement The Pittsburgh Summit' (24 - 25 September 2009)3
[29] Ibid, 6.
[30] Ibid, 2.

report to G-20 and International Monetary and Financial Committee (IMFC). IMF will review the result of the mutual assessment in the next summit.[31]

The FSB has been institutionalized through its Charter. The oversight of regulation with the tougher supervision of OTC derivatives, securitization markets, credit rating agencies, and hedge funds have been mandated. Further, improvement of rules in bank capital, both in quality and quantity to discourage excessive leverage has been undertaken. The upgraded Basel II, in which higher quality capital requirements, counter-cyclical capital buffers, higher capital in off-balance sheet activities based on the forward-looking provisions have been implemented.[32] The Basel Committee on Banking Supervision (BCBS) has developed a baseline leverage ratio proposal, along with an approach to adjust for differences in the accounting between International Financial Reporting Standards (IFRSs) and US Generally Accepted Accounting Principles (US GAAP). It has developed countercyclical buffer mechanism to reduce pro-cyclicality.

The Members have implemented Basel II framework. All OTC contract will be traded on exchanges platform, and will be cleared by centrally cleared counterparties. The Global Forum on Transparency and Exchange of Information delivered an effective program of peer review. It has worked on tax transparency. The FATF will fight against money laundering and terrorist financing and bring a public list of high-risk jurisdiction.[33]

The FSB peer review process undertake thematic country peer reviews. The thematic review has implemented standards agreed within FSB, with particular attention to consistency in cross-country implementation of norms. FSB has followed guidelines set by other peer review mechanism of IMF and World Bank, such as Financial Sector Assessment Program (FSAP) and Reports on the Observance of Standards and Codes (ROSCs). It has set up more than thirty Supervisory colleges for large complex financial institutions which meet and address issues on a continuous basis.[34]

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[31] G20 Leaders Statement: The Pittsburgh Summit (24 - 25 September 2009) <http://www.g20.utoronto.ca/2009/2009communique0925.html> accessed 04 February 2016.
[32] Ibid.
[33] The Third G-20 Summit, 'Leaders Statement The Pittsburgh Summit' (24 - 25 September 2009) 10.
[34] Ross P. Buckley and Douglas W. Arner, From Crisis to Crisis: The Global Financial System and Regulatory Failure (Kluwer Law International, 2011) Ch 9 International responses to the GFC, 140.

1.1.4. The Fourth G20 Summit on June 27, 2010 (Toronto Summit)

The theme of the Toronto Summit stated “Recovery and New Beginnings.” It was evident that growth was returning, but the recovery was uneven and fragile, unemployment was also very high in many countries. To sustain recovery, the member countries’ needed to deliver on existing stimulus plans which would improve the overall demand in the economy without compromise on fiscal consolidation and fiscal sustainability. The leaders of G-20 Countries committed to the fiscal consolidation conditions and stabilizing the debt by 2016. The effort in this direction will rebalance global demand and ensure global growth continues on a sustainable path.[35] The first stage of Mutual Assessment Process as taken up in third G-20 meeting was completed and the IMF and World Bank estimated overall reform in the global economy with the global output estimated to reach $4 trillion, 10 million new jobs created, and global imbalance drastically reduced.[36]

The G-20 members discussed the reform agenda based on four pillars. The first pillar is a strong regulatory system. The Basel Committee on Banking Supervision (BCBS) progressed towards a new global regime for bank capital and liquidity. The macroeconomic impact assessment of the Financial Stability Board (FSB) and BCBS reflect that the present national standards substantially converge to the new global standards. The second pillar is effective supervision where risk should be addressed with early intervention, if necessary. The third pillar is resolution and addressing of systemic institutions risks. The evolving global financial regulatory system will have tools to resolved forth coming crisis without passing the burden on to taxpayers. The fourth pillar is the transparent international assessment and peer review process. The FSAP (IMF/World Bank) peer review will be in accordance with the FSB Core Guidelines. The non-cooperative jurisdiction will be placed in public domain based on their adherence to prudential regulations. The FSB’s evaluation process will reflect the adherence to efficient information exchange and international cooperation standards in all jurisdictions.[37]

[35] The G-20 Toronto Summit Declaration (June 26 – 27, 2010) 1 <http://www.g20india.gov.in/pdfs/Link-24-Leaders-Toronto_Declaration_eng.pdf> accessed 05 Feb. 16.
[36] Ibid, 2.
[37] Ibid, 3-4

The G-20 agreement refrain for raising investment or trade barriers. On other hand, WTO, OECD, and UNCTAD undertake policy initiative to stimulate trade and investment in global financial system. They are committed to monitor activities and developments in international trade law and report publically on a quarterly basis.

The Multilateral Development Banks (MDBs) required to have adequate funds and thus it increased capital after the financial crisis. The MDBs overall lending to developing countries increased from $37 billion per year to $71 billion per year. The following table[38] details pre and post crisis increase in the capital of MDBs which reflects the next level of global financial integration.

Table A: Pre and Post crisis increases in the capital of MDBs

MDB	Capital Increase	Pre-Crisis Annual Lending [a]	New Annual Lending[b]
AfDB	200% increase	$1.8 B	$6 B
AsDB	200% increase	$5.8 B	$10 B
EBRD[c]	50% increase	$5.3 B	$11 B
IADB[d]	70% increase	$6.7 B	$12 B
IBRD	30% increase	$12.1 B	$15 B
IFC	$200M selective capital increase	$5.4 B	$17 B
Total	**85% increase in MDB captial**	**$37 B**	**$71 B**

All dollar figures in USD;
a - 2000-08
b – 2012-20
c- temporary nature
d- includes an agreement to relieve Haiti's debt to the IADB

38 Ibid, 23.

The mandate of MDB is to support the poorest States in an efficient way. It ensures that the new financial resources benefit both low and middle-income countries and its improved governance structure promotes stronger accountability, transparency and more decentralization mechanism ensuring financial sustainability in GFRS.

1.1.5. The Fifth G20 Summit on November 11-12, 2010 (Seoul Summit)[39]:

The theme of the fifth conclave was on "Shared Growth Beyond Crisis".[40] The Seoul Summit decided to work on inclusive, cooperative and country-specific policy actions to move closer to its mandate. These include coordinated macroeconomic policies containing fiscal consolidation, to safeguard ongoing recovery and sustainable growth, switching onto more market-determined exchange rate system and refraining from competitive devaluation of currencies. The vigilance mechanism adopted by G-20 countries and countries with excess reserve currencies reduce excessive risk arising due to volatile capital flows. The Mutual Assessment Process (MAP) was carried out as suggested in previous G-20 Summit.[41] Each financial authority along with IMF provided an assessment as part of the MAP, on the progress towards external sustainability and the consistency of monetary, fiscal, financial sector, balance of payment and other policies. Further, the IMF inclusive quota and governance reforms enhanced the legitimacy, credibility, and effectiveness of better representation. The Macro-Prudential Policy reforms in shadow banking, supervision of commodity derivatives markets improved overall market integrity and efficiency. The Seoul Consensus addressed the concern of critical bottlenecks. The next stage of reform was furthered in 2011 in France.[42]

[39] The G20 Seoul Summit Leaders' Declaration (11 – 12November, 2010) <http://www.g20india.gov.in/pdfs/link-25fifth-g20summit.pdf> accessed 05 Feb. 16.
[40] 'G20 India Secretariat, History and Past Presidencies' <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> accessed 02-Feb-16.
[41] The G20 Seoul Summit (n 39) 2.
[42] Ibid, 4.

1.1.6. The Sixth G20 Summit (Cannes Summit) on 3-4 November 2011[43]

The Cannes Communiqué was based on the theme of "Building our Common Future: Renewed Collective Action for the Benefit of All".[44] The ground reality reflected, the global recovery had slowed down due to sovereign-debt crisis in Europe. This led to increases in unemployment and tension in global financial system. There was clear indication of a reduction in overall growth in the world economy. The European leaders built a firewall to avoid contagion and implement robust economic governance reform in the Euro area.[45]

Further, The IMF efforts on new Precautionary and Liquidity Line (PLL) provide more flexible short-term liquidity to countries with strong policies and fundamentals facing exogenous shocks.[46] The FSB published a list of International Systemically Important Financial Institutions (SIFIs). It will take measures so that no financial firms are deemed "too big to fail". The IOSCO evaluate the working of Credit Default Swaps market. Though the Global Forum framework failed to qualify international standards in tax or comprehensive tax information exchange, the Multilateral Convention on Mutual Administrative Assistance in Tax Matters was strongly encouraged, and other jurisdictions were encouraged to join the Convention. The Los Cabos, Mexico Summit will follow-up and work on the next stage of reforms in the global financial system.[47]

1.1.7. The Seventh G20 Summit (Los Cabos Summit) on 18-19 June 2012

The global financial system continued to face imbalance on the external and internal front. This fragility shook the confidence in the market impacting jobs, trade and financial market.[48]

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[43] G20 Leaders Cannes Summit (3-4 November 2011) < http://www.g20india.gov.in/pdfs/link-26sixth-g20summit.pdf> accessed 02-Feb-16.
[44] The G20 Seoul Summit Leaders' Declaration (11 – 12November, 2010) <http://www.g20india.gov.in/pdfs/link-25fifth-g20summit.pdf> accessed 05 Feb. 16
[45] G20 Leaders Cannes Summit (3-4 November 2011) 1 < http://www.g20india.gov.in/pdfs/link-26sixth-g20summit.pdf> accessed 05-Feb-16.
[46] Ibid, 2.
[47] Ibid, 6.
[48] The G20 Los Cabos Summit (18-19 June 2012) 1 < http://www.g20india.gov.in/pdfs/link-27seventh-g20summit.pdf> accessed 05-Feb-16.

The IMF's task on integrated surveillance process investigates the issues of exchange rate policies, capital account liberalization, global liquidity and fiscal-monetary policies of members countries. This multilateral surveillance mechanism enhances overall monitoring of global finance.[49] This summit deliberated the reviewing of FSB Charter and placing it for a permanent organization status with legal personality, to strengthen governance in GFRS.[50] In the Los Cabos Summit, one of the important agendas was on improving the international financial architecture in an interconnected world. The St. Petersburg Summit carried this task further in 2013.

1.1.8. The Eighth G20 Summit on 5-6 September 2013 (St Petersburg Summit)[51]

The IMF and World Bank implementation of the Debt Sustainability Framework of Low-Income Countries promoted sustainable financing through suitable route.[52] Both institution prepared sustainable financing guidelines for developing countries. The IMF, the World Bank Group, the European Bank for Reconstruction and Development OECD (EBRD-OECD) and other IOs geared up to implement the G-20 Action Plan on the Development of the local currency bond markets (LCBMs). The implementation of new Basel III capital accord, and OTC derivatives to be traded on an exchange and centrally cleared system improved Macro-Prudential Regulation aspect.[53] The FSB, IOSCO and other standard setting bodies have developed public consultation methodologies for identifying global systemically important non-bank non-insurance financial institutions in order to assess the overall market risk.

1.1.9. The Ninth G20 Summit on November 15-16, 2014 (Brisbane Summit)[54]

The Brisbane Summit agreed to work on a partnership to boost growth, economic resilience, and streamline global financial institution. They have developed Global Infrastructure Hub for knowledge sharing platform and channel information between

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[49] Ibid, 6.
[50] Ibid, 8.
[51] G20 Leaders' Declaration Saint Petersburg Summit (5-6 September 2013) <http://www.g20india.gov.in/pdfs/Saint_Petersburg_Declaration_ENG.pdf> accessed 06 Feb. 16
[52] Ibid, 15.
[53] Ibid, 17.
[54] 'G20 India Secretariat, History and Past Presidencies' <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> accessed 06-Feb-16.

government, development banks and other international organization to improve functioning and financing of infrastructure markets.[55] The G20/OECD shifted to Base Erosion and Profit Shifting (BEPS) to modernize international tax standards which will consider profit and value created.

The Financial Crisis and Information Gaps, Report to the G-20 Finance Ministers and Central Bank Governors Prepared by the IMF Staff and the FSB Secretariat October 29, 2009[56]

The report provides proposals for strengthening data collection. Data gaps are an unavoidable consequence of the ongoing development of markets and institutions. Indeed, the recent crisis has reaffirmed an old lesson "good data and good analysis are the lifeblood of effective surveillance and policy responses" at both the national and international levels (Executive Summary, Page No. 4).[57]

The integration of economies and markets, as evidenced by the financial crisis spreading worldwide, highlights the critical importance of relevant statistics that are timely and internally consistent as well as comparable across countries. The international community has made a great deal of progress in recent years in developing a methodologically consistent economic and financial statistics system covering traditional datasets, and also in developing and implementing data transparency initiatives. Within macroeconomic (real sector, external sector, monetary and financial, and government finance) statistics, the System of National Accounts (SNA) is the central organizing framework. For Macro-Prudential statistics, an analogous framework is not yet in place, but there is an on-going progress in developing a consensus among data users on key concepts and indicators, including in relation to the SNA.

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[55] Ibid.

[56] IMF Staff and the FSB Secretariat, Report to the G-20 Finance Ministers and Central Bank Governors (October 29, 2009) <http://www.fsb.org/wp-content/uploads/r_091029.pdf> accessed 06-Feb-16; See also, The International Monetary Fund and The Financial Stability Board, Users Conference on the Financial Crisis and Information Gaps <http://www.imf.org/external/np/seminars/eng/2009/usersconf/index.htm> accessed 06-Feb-16

[57] Ibid, 4.

Cross-Border Financial Linkages: There are significant international financial network connections that have developed and are not captured by available information. For instance, the continued rapid growth of large financial institutions with a global reach has increased the importance of cross-border network links in national financial stability analysis, but information on these networks is lacking. Related is a lack of information on “crowded trades” whereby large financial institutions banks and nonbanks invested in the same asset class and/or funded themselves in markets where the supply of funding was subject to common directional risks.

The FSB has collaborated with supervisory colleges to improve information collection and sharing with Micro-Prduential Regulators and Macro-Prudential Regualtors. If there are accurate data accessible, there is greater possibility of forecasting boom and bust in GFRS (Recommendation # 8: page-19).[58]

2. The Role and Function of Financial Stability Board (FSB) in GFRS

The framework of global financial regulation was based on the objective to strike the balance between Micro-Prudential Regulation and Macro-Prudential Regulation.[59] However, after the global financial crisis, the international regulatory mechanism shifted focus from Micro-Prudential to Macro-Prudential Regulation.[60] The FSB was the first step in this direction.[61] It was built along the lines of sustainable global Macro-Prudential Regulation.[62] It encompasses a membership of national financial regulators, central bankers, International Financial Institutions (IFIs), sector specific international supervisors

[58] Ibid, 19.
[59] Kern Alexander, ‘Redesigning Financial Regulation to Achieve Macro-prudential Objectives: A commentary on some of the regulatory challenges’ (2014) 7 <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/newsticker/micromacro.html > accessed 06 Feb. 16.
[60] Ibid, 8.
[61] G-20 London Summit – Leaders’ Statement (2 April 2009) <http://www.g20india.gov.in/pdfs/Link-5-Leaders-Declaration-Second-Summit.pdf> accessed 3 February 2016
[62] International Monetary Fund, ‘Key Aspects of Macroprudential Policy’ (10 June, 2013) 6 <https://www.imf.org/external/np/pp/eng/2013/061013b.pdf> accessed 06-Feb-16.
The most recent embodiment of an international financial soft law institution is the Financial Stability Board (FSB). The FSB consists of twenty six member countries, the European Central bank and the International Monetary Fund. The representatives of FSB member countries are the same as that of the Basel Committee. <http://www.financialstabilityboard.org/about/overview.htm> (last accessed 15 Jan 2012).

and standard-setting bodies (SSBs) who are responsible for financial stability.[63] Its mission is to ensure that national and international authorities and relevant international supervisory bodies shall more effectively coordinate their respective responsibilities to support international financial stability, thus improving the function of the overall markets.[64]

The Financial Stability Board's enlarged mandate was approved by the Heads of State and Government of the G-20 to establish the Financial Stability Board with a stronger institutional basis and enhanced capacity (London Summit[65], 2 April 2009, "Declaration on Strengthening the Financial System"). The Pittsburgh Summit endorsed FSB's original Charter and also set out the objectives (Pittsburgh Summit, 25 September 2009).[66] The Seoul Summit affirmed the FSB's role in coordinating at the international level, the work of national financial authorities and international standard-setting bodies in developing and promoting the implementation of effective regulatory, supervisory and other financial sector policies in the interest of global financial stability (Seoul Summit Leaders' Declaration, 12 November 2010).

The FSB plays a key role in promoting the reform of international financial regulation. The G20 called for strengthening of the FSB's capacity resources and governance through the establishment of the FSB on an enduring organizational basis (Cannes Summit, 4 November 2011, Cannes Summit Final Declaration). The FSB will promote strong regulatory, supervisory function and foster a level playing field through coherent policy implementation, across sectors and jurisdictions. It sets out concrete steps to strengthen its capacity, resources, and governance by enduring organizational footing (G20 Los Cabos Summit on 19 June 2012: Strengthening FSB Capacity, Resources, and Governance).[67] In Los Cabos Summit, it restated and amended its Charter which reinforces certain elements of its mandate, including its role in standard setting and in promoting Members'

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[63] Domenico Lombardi, The Governance of the Financial Stability Board (2011) Global Economy and Development at Brookings, Brookings Institution, 3.
[64] Ibid, 4.
[65] G-20 London Summit, Declaration on Strengthening the Financial System (2 April 2009) 4 <http://www.fsb.org/wp-content/uploads/london_summit_declaration_on_str_financial_system.pdf> accessed 06 February 2016.
[66] The Third G-20 Summit, 'Leaders Statement The Pittsburgh Summit' (24 - 25 September 2009).
[67] FSB, 'Report to the G20 Los Cabos Summit on Strengthening FSB Capacity, Resources and Governance' <http://www.fsb.org/wp-content/uploads/r_120619c.pdf> accessed 06-Feb-16.

implementation of international standards and accepted the G20 and FSB commitments and policy recommendations. It was then decided to pursue a gradual approach to the institutionalization of the FSB by establishing it as an association under Swiss law and thereby vesting it with legal personality. On 28 January 2013, the FSB established itself as a not-for-profit association under Swiss law with its seat in Basel, Switzerland (Preface, FSB - 2nd Annual Report 2015).[68]

The FSB has adopted twelve key standards for sound financial systems, all of which are legally non-binding soft law, nevertheless they are incorporated by most of the regulatory regimes of all countries.[69] Since the establishment of FSB, it has been addressing a diverse range of regulatory concerns such as supervisory colleges[70] to monitor each large international financial firms,[71] principles for cross-border cooperation on crisis management,[72] etc. It has engaged multilateral dialogues to resolve home-host and global issues.[73]

2.1. The FSB's Structure

The objective of the FSB, as laid out in Article 1, is "to harmonize, at the global level, efforts of national financial regulators and international standard setting bodies(SSBs) for the purpose of developing and promoting the implementation of effective financial sector policies with the collaboration of international financial institutions (…)".[74]

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[68] FSB, 2nd Annual Report: 1 April 2014 – 31 March 2015 (17 July 2015) < http://www.fsb.org/wp-content/uploads/FSB-2nd-Annual-report.pdf.> accessed 06-Feb-16.

[69] 'Table of Key Standards for Sound Financial Systems - Financial Stability Board' <http://www.fsb.org/what-we-do/about-the-compendium-of-standards/key_standards/table-of-key-standards-for-sound-financial-systems/> accessed 06-Feb-16.

[70] FSB, 'Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stablility' (5 September 2013) 9 <http://www.fsb.org/wp-content/uploads/r_130905c.pdf?page_moved=1> accessed 06-Feb-16.

[71] Ibid, 6

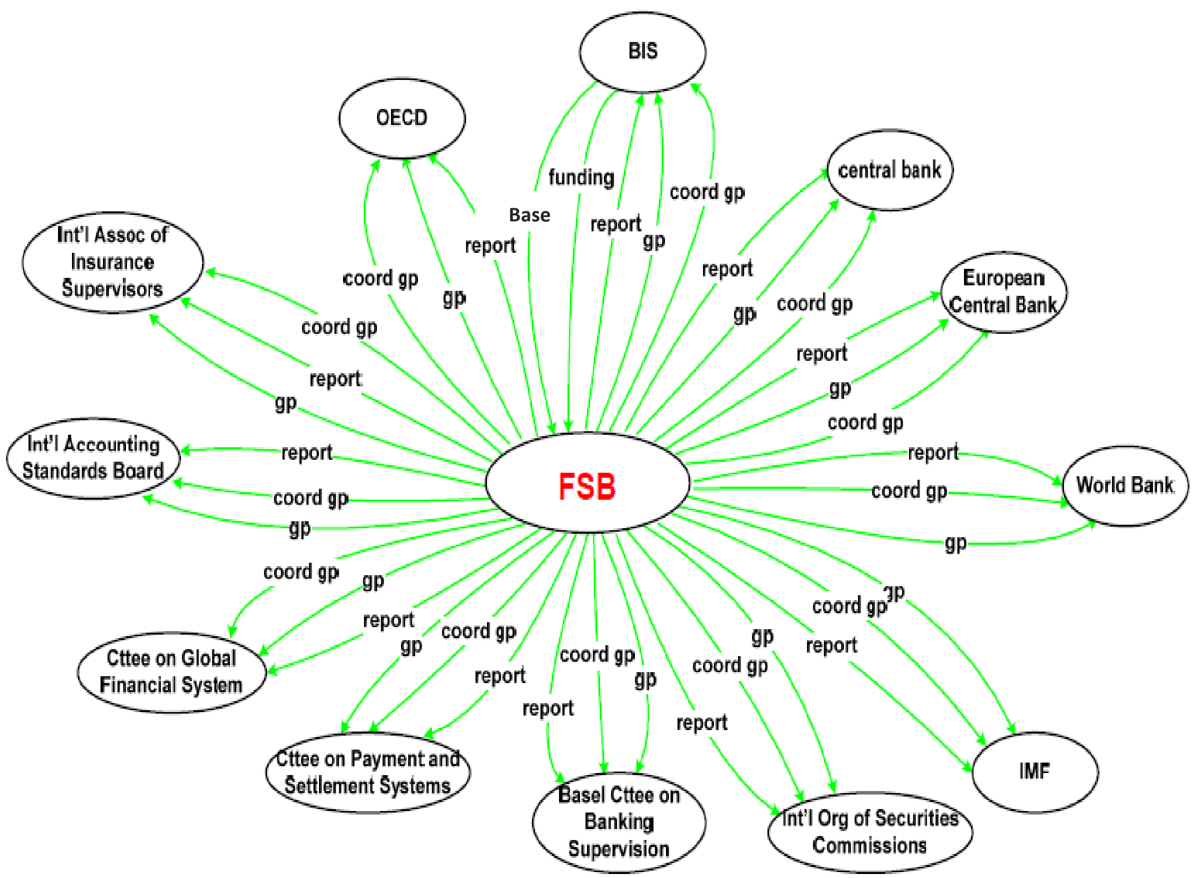
[72] 'Principles for Cross-border Cooperation on Crisis Management - Financial Stability Board' (2 April 2009) 1-5 <http://www.fsb.org/2009/04/principles-for-cross-border-cooperation-on-crisis-management/> accessed 06-Feb-16.

[73] Thomas Cottier and others, *The Rule of Law in Monetary Affairs* (Cambridge University Press 2014) 531.

[74] FSB Charter, Article 1. Objectives of the Financial Stability Board The Financial Stability Board (FSB) is established to coordinate at the international level the work of national financial authorities and international standard setting bodies (SSBs) in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. In collaboration with the international financial institutions, the FSB will address vulnerabilities affecting financial systems in the interest of global financial stability.

The following chart describes the coordination of global policy (gp) by FSB with stakeholders in the global financial regulatory system and Article 5[75] of the Charter detailed about stakeholders such as financial authorities including ministries of finance, the central bank, regulatory authorities, International financial institutions, and International standard setting bodies (SSBs). It provides recommendations on stabilizing the financial system to the BIS, committees, and associations coordinated by the BIS, central banks, the European Central Bank, the World Bank, the International Monetary Fund, and others.

Figure III: FSB coordination in GFRS[76]



[75] FSB Charter, Article 5, Members, 3.

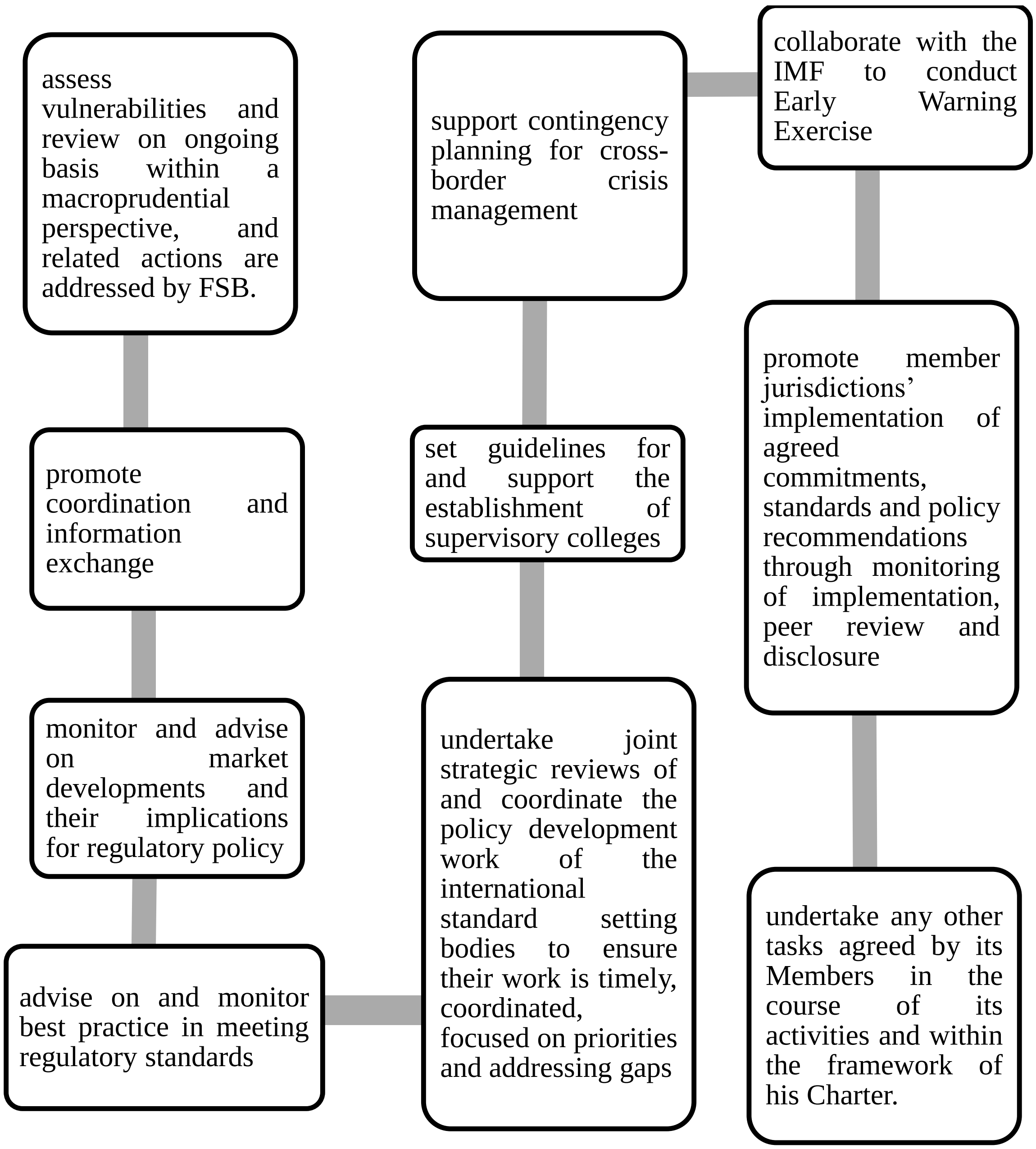
[76]Steve Waddell and others, 'Creating a Global Finance System for the 21st Century: An Action Strategy, A Report of the Global Finance Initiative (Global Action Network Net (GAN-Net) and iScale, March 26, 2009) 24 <http://networkingaction.net/wp-content/uploads/files/GFIFinalReport.pdf> accessed 06-Feb-16.

The mandate and responsibilities are detailed in Article 2 of FSB Charter. The FSB facilitates and coordinates the alignment of the activities of the SSBs to address any overlaps or gaps and clarify demarcations in the light of changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure as well as accounting and auditing.

The FSB addresses issues of systematic risk and other areas, which do not fall within the functional domain of another international standard setting body, or on issues that have cross-sectoral implications (Article 2).[77] The following chart reflects detailed mandate as stated in Article- 2.

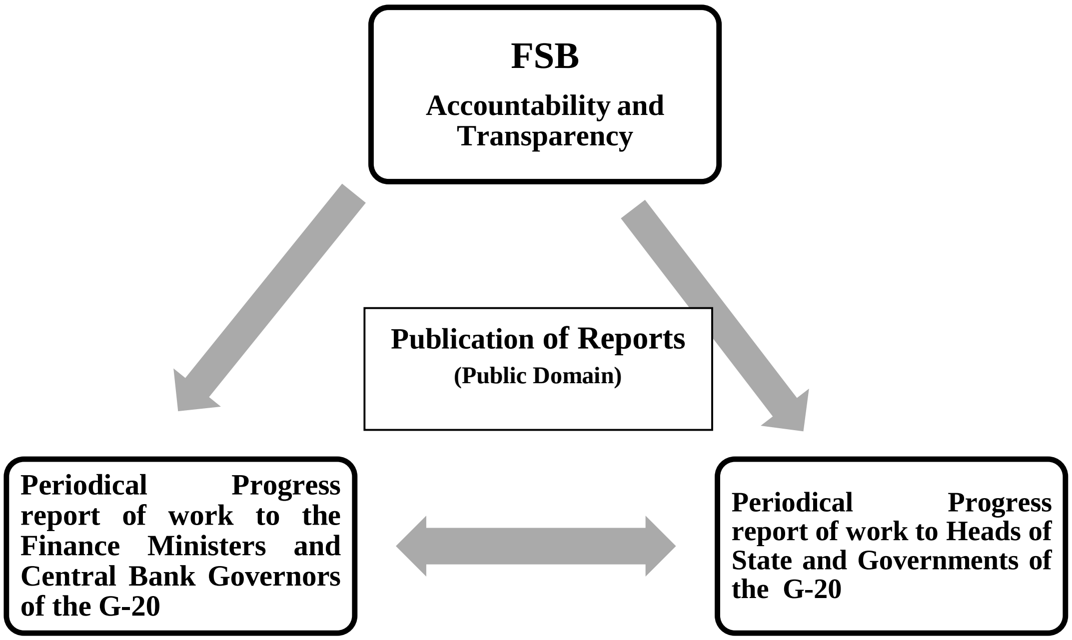
[77] FSB Charter, Article 2, Mandate and tasks of the FSB, 1.

Figure IV: Term of office and mission of FSB



The FSB mission is to reach out member countries by method of consultations. Article 3 of Consultations is developed for this purpose where FSB will consult widely amongst its Members and with other stakeholders including private sector and non-member authorities. Moreover, Article 4 of FSB illustrates its accountability and transparency where FSB submits its periodical reporting of progress work to the financial authorities of the G-20, and to Heads of State and Governments of the G-20. Its accountability and transparency go beyond its members through publication of reports in the public domain.

Figure V: FSB Accountability and Transparency[78]



The FSB runs a peer review based mechanism along the lines of the Organization for Economic Cooperation and Development (OECD), the Reports on the Observance of Standards Codes (ROSCs), and Financial Sector Assessment Program (FSAP) peer review conducted by the International Monetary Fund (IMF) and World Bank.[79] Though the country under consideration has a veto for acceptance of the eventual report publication, this process enables greater dialogue to raise compliance with international standards.[80] Incidentally, from the viewpoint of SSBs, this involves a greater chance that countries may implement updated standards in the process of dialogue. Article 6 of the FSB Charter

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[78]FSB Charter, Article : 4, 3.

[79] International Monetary Fund and The World Bank, 'The Financial Sector Assessment Program After Ten Years: Experience and Reforms for the Next Decade' (August 28, 2009) 40 <https://www.imf.org/external/np/pp/eng/2009/082809B.pdf> accessed 07-Feb-16; See also, Claudio A. Pardo, '2011 Review of the Standards and Codes Initiative - ROSC Case FStudies' IMF and World Bank, 16, February 2011) 26 <https://www.imf.org/external/np/pp/eng/2011/021611b.pdf> accessed 07-Feb-16.

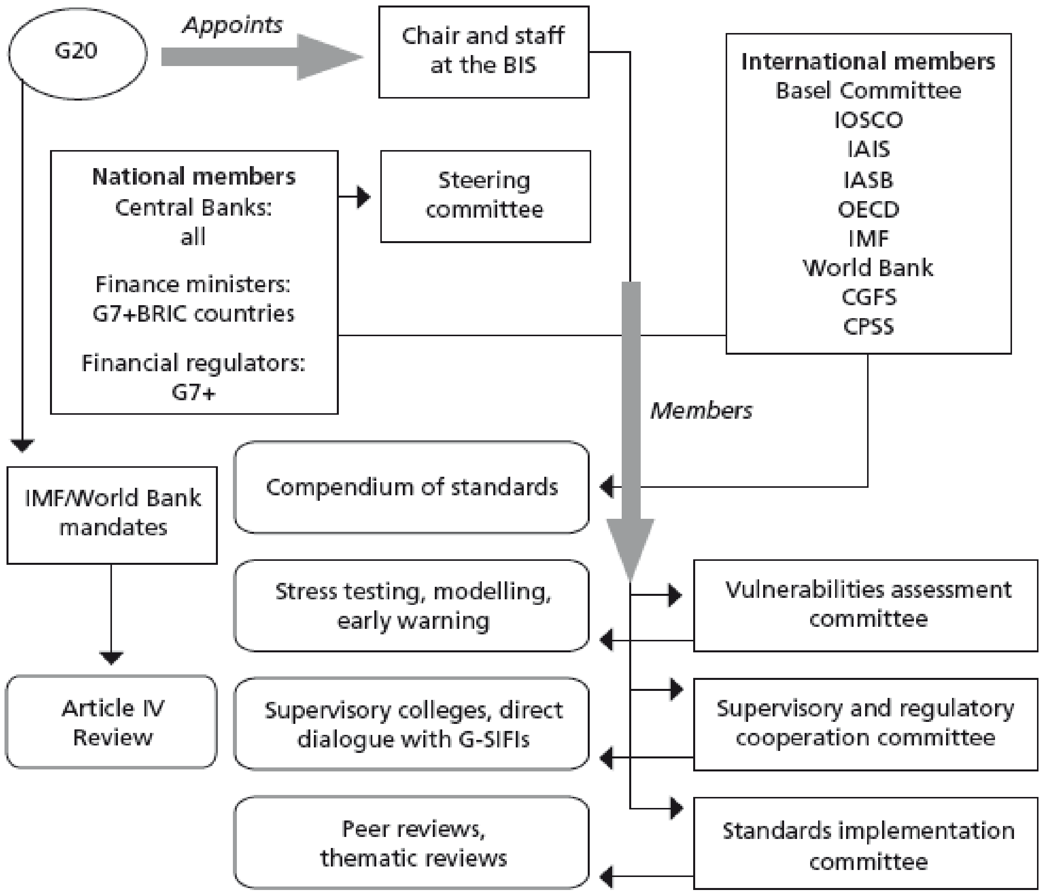
[80] Eric Helleiner, The Financial Stability Board and International Standards (2010) No. 1 CIGI G20 Papers, 10 <https://www.cigionline.org/publications/2010/6/financial-stability-board-and-international-standards> accessed 07 Feb. 16

specify “commitment of members in its jurisdiction to practice the maintenance of financial stability, sustain the openness and transparency of financial sector, implement global financial standards and undergo periodic peer reviews, using among other evidence, IMF/World Bank public FSAP reports.” The FSB will periodically report on the degree of adherence by Members to these commitments and the evaluation process. The tasks laid down in Article 2(1) (e); the standard setting bodies will report to the FSB on their work without prejudice to their existing reporting arrangements or their independence. This framework strengthens accountability of standard setting bodies towards GFRS.[81] The process of peer review should not undermine the independence of the standard-setting practice (Article 6 (3)). Some scholars have warned that the latter “creates considerable ambiguity about this aspect of the FSB’s mandate,” highlighting the risk of a potential weakening of the international macroprudential agenda if the FSB is unable to enforce its coordinating role concerning SSB activities.[82]

The FSB is to follow a macro-prudential directive, insofar as it oversees the policy work of the international SSBs and complements the alignment of SSB activities. This task is more explicit and well defined in the case of the FSB than it was with the FSF. At the G-20 Leaders’ Summit in April 2009, the FSB developed a toolbox of measures to promote adherence to prudential norms with non-cooperative jurisdictions (NCJs).[83] Further, in September 2009, the G-20 promised to “deliver an effective program of peer review, capacity building and countermeasures to address NCJs. In the G-20 summit in Pittsburgh, the G-20 leaders repeated to initiate a peer review process of NCJs and supplementary follow-up.[84]

[81] FSB Charter, Article 6, 3.
[82] Helleiner (n 80) 10.
[83] Eric Helleiner, The Financial Stability Board and International Standards (2010) No. 1 CIGI G20 Papers, 10 <https://www.cigionline.org/publications/2010/6/financial-stability-board-and-international-standards> accessed 07 Feb. 16.
[84] Ibid, 9-10.

Figure VI: Organizational set up of the Financial Stability Board[85]



The FSB's coordination of global financial regulation depends upon what level of the representatives are attending the Plenary. Article 10[86] of FSB confirms seriousness towards policy implementation where "central bank governor or immediate deputy, head or immediate deputy of the main regulatory agency and deputy finance minister or deputy head of finance ministry are to participate in the session. Along with them, the Plenary includes the chairs of the main SSBs, a high-level representative of the IMF, the World Bank, BIS, and OECD". The mission of FSB is clearly to be impactful and financial standards need to be put into practice at national level. The number of seats in the Plenary

[85] Shawn Donnelly, Institutional Change at the Top: From the Financial Stability Forum to the Financial Stability Board in Renate Mayntz (ed), *Crisis and Control Institutional Change in Financial Market Regulation (*Campus Verlag Frankfurt/New York 2012) 267.
[86] FSB Charter, Article 10, 5.

depends upon the size of the domestic economy and financial market activity of the corresponding Member jurisdiction (Article 11).[87]

“The Steering Committee provides operational guidance between the Plenary meetings to carry forward the directions of the FSB and prepare the Plenary Meetings in order to allow the Plenary to fulfill its mandate efficiently. The steering committee has also established a working group where non-FSB members are also included. The task of the Steering Committee includes monitoring and guiding the progress of FSB’s ongoing work, endorsing harmonization across and commission work from the Standing Committees and other working groups” (Article 12).[88] “The Standing Committee on Assessment of Vulnerabilities (SCAV), monitor and assess vulnerabilities affecting the global financial system and provide input for the Early Warning Exercise conducted in collaboration with the IMF” (Article 14). The Standing Committee on Supervisory and Regulatory Cooperation (SCSRC) ensure that the different policy initiatives fit together into a coherent whole, set guidelines for and oversee the establishment and efficient functioning of supervisory colleges, and monitor best practice in meeting regulatory standards with a view to ensure consistency, cooperation and a level playing field across jurisdictions (Article 15).[89]

The Standing Committee on Standards Implementation (SCSI) ensure comprehensive and rigorous implementation of international financial standards, the agreed G20 and FSB commitments, recommendations and other initiatives in consultation and coordination with other relevant bodies, through mechanisms such as the Coordination Framework for Implementation Monitoring (CFIM). They undertake peer reviews amongst its members, report to the Plenary on members’ commitments and progress in implementing international financial standards, agreed G20 and FSB commitments, recommendations, and other initiatives, and encourage global adherence to prudential regulatory and supervisory standards (Article 16).[90]

[87] FSB Charter, Article 11, 5.
[88] FSB Charter, Article 12, 6.
[89] FSB Charter, Article 15, 7.
[90] FSB Charter, Article 16, 7.

The Regional Consultative Groups[91] provide a structured mechanism for interaction of FSB members with non-members regarding the various FSB initiatives underway and planned. These groups promote implementation within the region of international financial policy initiatives (Article 20).[92]

Unlike the multilateral financial institutions, the FSB lacks a legal form and any formal power, given that its Charter is an informal and nonbinding memorandum of understanding for cooperation adopted by its members In fact, Article 23[93] cautions that the "Charter is not intended to create any legal rights and obligations," putting the onus of implementation of any decision on peer pressure rather than on the enforcement of legal obligations.[94] In an implicit acknowledgment of this fact, the Charter itself underscores the "collaborative" approach in Articles 1 and 2 of the FSB in pursuing its objective and mandate.[95]

2.2. Comparison between FSF and FSB[96]

FSF was an undeveloped institution with the aim to provide a framework for macroprudential regulation.[97] However, the fundamental background to establish FSB was initiated by FSF. The FSB encompasses a far more formal set up compared to what FSF comprised. The FSB footprints will be visible through the future roadmap on dealing with financial stability whereas FSF will be the background history of FSB in the discussion of the global financial regulatory system. The following table describes FSB as the new wine in a new bottle.

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[91] List of the FSB Regional Consultative Groups: (1) FSB Regional Consultative Group for the Americas, (2) FSB Regional Consultative Group for Asia, (3) FSB Regional Consultative Group for the Commonwealth of Independent States, (4) FSB Regional Consultative Group for Europe, (5) FSB Regional Consultative Group for the Middle East and North Africa, and (6) FSB Regional Consultative Group for the Sub-Saharan Africa.

[92] FSB Charter, Article 20, 8.

[93] FSB Charter, Article 23, 10.

[94] Sheng, A. 2009. "Session 8: Financial Crisis and Global Financial Governance: A Network Analysis." <www.growthcommission.org/storage/cgdev/ documents/sheng.pdf.> accessed 07 Feb. 16.

[95] Baker, A. 2010. "Mandate, Accountability and Decision- Making Issues to Be Faced by the Financial Stability Board." In *The Financial Stability Board: An Effective Fourth Pillar of Global Economic Governance?* edited by S. Griffith-Jones, E. Helleiner, and N. Woods. Waterloo, Ont.: CIGI. Available at www. cigionline.org.

[96] CIGI , 'Financial Stability: From FSF to FSB …' <https://www.cigionline.org/blogs/2010/11/financial-stability-fsf-fsb> accessed 07-Feb-16.

[97] Shazia Ghani, Global financial crisis of 2007 : analysis of origin & assessment of contagion to emerging economies : lessons & challenges for financial regulation, PhD Thesis (University of Grenoble, 2006) 272 < https://halshs.archives-ouvertes.fr/tel-00987627/document> accessed 07 Feb. 16.

Table B: Comparing the Financial Stability Forum and the Financial Stability Board[98]

Role Responsibility and Function	**Financial Stability Forum (Details from 1999 Tietmeyer report unless otherwise noted)**	**Financial Stability Board (Details from Charter and subsequent statements)**
Conferring Immunities and privileges on the legal form	▪ Informal forum base on Tietmeyer report ▪ No legal base	▪ FSB charter was brought on Pittsburgh Summit (2009) ▪ Amendment of the FSB Charter (Los Cabos Summit on Strengthening FSB Capacity, Resources and Governance, June 2012 ▪ FSB by establishing it as an association under Swiss law to vest it with legal personality. On 28 January 2013, the FSB established itself as a not-for-profit association under Swiss law with its seat in Basel, Switzerland. ▪ Articles of Association of the FSB (28 January 2013) ▪ FSB Procedural Guidelines (1 February 2013)
Mandate	▪ "assess issues and vulnerabilities affecting the global financial system and identify and oversee the actions needed to address them, including encouraging, where necessary, the development or strengthening of international best practices and standards and defining priorities for addressing and implementing them." (G7 statement) ▪ "ensure that national and international authorities and relevant international supervisory bodies and expert groupings can more effectively foster and coordinate their respective responsibilities to promote	▪ Assess vulnerabilities affecting the global financial system and identify and review on a timely and ongoing basis the regulatory, supervisory and related actions needed to address them, and their outcomes. ▪ Promote coordination and information exchange among authorities responsible for financial stability. ▪ Monitor and advise on market developments and their implications for regulatory policy. ▪ Advise on and monitor best practice in meeting regulatory standards. ▪ Undertake joint strategic reviews of the policy development work of the international standard setting bodies to ensure their work is timely coordinated, focused on priorities and addressing gaps. ▪ Set guidelines for and support the establishment of supervisory colleges. ▪ Support contingency planning for cross-border crisis management, particularly on systemically important firms.

[98] Eric Helleiner, The Financial Stability Board and International Standards (2010) No. 1 CIGI G20 Papers, 20-21, <https://www.cigionline.org/publications/2010/6/financial-stability-board-and-international-standards> accessed 07 Feb. 16.

	international financial stability, improve the functioning of the markets and reduce systemic risk" (G7 statement)	▪ Collaborate with the IMF to conduct Early Warning Exercises. ▪ Promote member jurisdictions' implementation of agreed commitments, standards and policy recommendations through monitoring of implementation, peer review and disclosure. ▪ Undertake any other tasks agreed by its Members in the course of its activities and within the framework of this Charter. ▪ The FSB will promote and help coordinate the alignment of the activities of the SSBs to address any overlaps or gaps and clarify demarcations in light of changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure, as well as accounting and auditing. ▪ The FSB should, as needed to address regulatory gaps that pose risk to financial stability, develop or coordinate development of standards and principles, in collaboration with the SSBs and others, as warranted, in areas which do not fall within the functional domain of another international standard setting body, or on issues that have cross-sectoral implications.
Country Membership (numbers of representatives)	▪ G7 (3) ▪ Added in 1999: Australia (1), Singapore (1), Hong Kong (1), Netherlands (1) ▪ Added in 2007: Switzerland (1)	G7 (3), Brazil (3), Russia (3), India (3), China (3), Australia (2), Mexico (2), Netherlands (2), Spain (2), South Korea (2), Switzerland (2), Argentina (1), Hong Kong (1), Indonesia (1), Singapore (1), Saudi Arabia (1), South Africa (1), Turkey (1)
Other Members (number of representatives)	IMF(2), World Bank (2), BIS (1), OECD (1), BCBS (2), IOSCO (2), IAIS (2), GCFS (1), CPSS/CPMI (1), ECB (1)	Same plus European Commission
Level of Representation	"Representation should be at a high level (that is, Deputy Ministers and Deputy Governors, Deputy Heads of the IFIs, Chairs and appointed members of international groupings)." (Tietmeyer, 1999)	"Representation at the Plenary shall be at the level of central bank governor or immediate deputy; head or immediate deputy of the main supervisory/regulatory agency; and deputy finance minister or deputy head of finance ministry. Plenary representatives also include the chairs of the main SSBs and committees of central bank experts, and high-level representatives of the IMF, the World Bank, the Bank for International Settlements (BIS) and the Organization for Economic Co-operation and Development. The chair can extend, after consultation with Member, ad-hoc invitations to representatives of non-FSB Members and

		representatives of the private sector to attend the whole or part of the Plenary Meetings".
Internal governance	▪ Chairperson ▪ Secretary-General ▪ Secretariat (in Basel) ▪ Plenary (consensus rule) ▪ Ad hoc working groups	▪ Chairperson ▪ Secretary-General ▪ Secretariat (in Basel) ▪ Plenary (consensus rule) ▪ Steering Committee ▪ Standing Committees ▪ Working Groups ▪ The Regional Consultative Groups (mode where Non-FSB member to participate)
Accountability	Reports to the G7 finance ministers and central bank governors	Reports work to the Finance Ministers and Central Bank Governors of the G-20 and Heads of State and Governments of the G-20, beyond them publication of report are in public domain.
Relationship to SSBs	Not specified	▪ "the standard setting bodies will report to the FSB on their work without prejudice to their existing reporting arrangements or their independence. This process should not undermine the independence of the standard-setting process but strengthen support for strong standard setting by providing a broader accountability framework." ▪ FSB will "undertake joint strategic reviews of the policy development work of the international standard setting bodies to ensure their work is timely, coordinated, focused on priorities and addressing gaps." ▪ FSB will "promote and help coordinate the alignment of the activities of the SSBs to address any overlaps or gaps and clarify demarcations in light of changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure, as well as accounting and auditing."
International Standard-setting	▪ delegated to SSBs	▪ delegated to SSBs ▪ FSB
Compliance Mechanisms	▪ voluntary IMF/WB surveillance ▪ market pressure ▪ Name and shame, and possible sanctions vis-à-vis OFCs	▪ IMF/WB monitoring (for members, mandatory FSAPs every five years, and publication of assessments used as a basis for the ROSCs) ▪ market pressure ▪ name and shame, and possible sanctions against all non-cooperating jurisdictions ▪ membership requirement to implement international standards ▪ mandatory peer reviews for members

To enhance the legitimacy of the FSB standard setting, the G20[99] and FSB increased their membership to include 12 additional member countries compared to the previous membership of the Financial Stability Forum and the G10 standard setting committees. The additional membership includes large developing and emerging market countries, such as China, South Africa, India, and Brazil. The following table C describes the widened horizon of FSB presence in the global financial system. The following table details the representation in FSF versus FSB. As per Article 11[100] of the number of seats assigned to each member jurisdiction reflects: (a) the size of the economy, (b) the activity of the financial market; and (c) national financial stability arrangements (level of adherence to international standards and codes, participation in the international evaluation programs and the level of disclosure given to them), resulting in the following distribution: countries with one seat in the plenary are Argentina, Hong Kong, Indonesia, Saudi Arabia, Singapore, South Africa and Turkey; countries with two seats in the plenary are Australia, Mexico, Netherlands, South Korea, Spain and Switzerland; countries with three seats in the plenary are Brazil, Russia, India, China, Canada, France, Germany, Italy, Japan, United Kingdom and United States.[101] This voting share becomes vital when the plenary is taking a decision based on the consensus mechanism (Article 9(2)).[102]

[99] Malcolm D. Knight, Reforming the Global Architecture of Financial Regulation the G20, The IMF and the FSB (2014) CIGI Papers NO. 42, 5.
[100] FSB Charter, Article 11, 5.
[101] Kern Alexander, Global Financial Standard Setting, the G10 Committees, and International Economic Law (2009) Volume 34 Issue 3, Brooklyn Journal of International Law, 88 <http://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1178&context=bjil> accessed 27 January 2016.
[102] FSB Charter, Article 9(2), 4.

Table C: Representation of FSF as compared to FSB[103]

	Countries/Micro-Prudential Regulators	FSF	FSB
Initial membership	Canada	**3**	**3**
	France	**3**	**3**
	Germany	**3**	**3**
	Italy	**3**	**3**
	Japan	**3**	**3**
	United Kingdom	**3**	**3**
	United States	**3**	**3**
	IMF	**2**	**2**
	World Bank	**2**	**2**
	BIS	**1**	**1**
	OECD	**1**	**1**
	BCBS	**2**	**2**
	IOSCO	**2**	**2**
	IAIS	**2**	**2**
	GCFS	**1**	**1**
	CPSS	**1**	**1**
	ECB	**1**	**1**
Added to FSF in 1999	Australia	**1**	**2**
	Hong Kong	**1**	**1**
	The Netherlands	**1**	**2**
	Singapore	**1**	**1**
Added to FSF in 2002	IASB	**1**	**1**
Added to FSF in 2007	Switzerland	**1**	**2**
Added to FSB in 2009	Argentina		**1**
	Brazil		**3**
	China		**3**
	India		**3**
	Indonesia		**1**
	Mexico		**2**
	Russia		**3**
	Saudi Arabia		**1**
	South Africa		**1**
	South Korea		**2**
	Spain		**2**
	Turkey		**1**
	European Commission		**1**

[103] Garry J. Schinasi and Edwin M. Truman, 'Reform of the Global Financial Architecture' (2010) Bruegel and the Peterson Institute for International Economics W P 10 - 14, 55 <https://www.piie.com/publications/interstitial.cfm?ResearchID=1674> accessed 17 January 2016.

2.3. Coordination between Financial Stability Board and International Monetary Fund

The FSB in the global financial regulatory mechanism has provided the missing link between Micro-Prudential Regulator with the wider Macro-Prudential Regulator, including IMF, for better coordination and harmonization.[104] The growing significance of Macro-Prudential Regulation has led the FSB to work in an inter-connected manner with the IMF.[105] The IMF-FSB have undertaken collaborative early warning exercises to strengthen assessments of systemic risks and provide adequate firewall and regulatory measures in response to systemic risks.[106] The combination of the IMF's macro-financial expertise with FSB's coordination of the regulatory gaps have strengthened the IMF's information and surveillance mechanism in accordance with other interconnected regulatory framework for efficient monitoring in GFRS.[107] This framework has minimizied cost of monitoring the Macro-Prudential Regulation.

The success of the FSB/IMF collaboration in Macro-Prudential Regulation will address the concern of FSB's effectiveness, accountability and legitimacy of its standards and recommendations for countries not represented in the G20. The legitimacy and leadership of the G20 will be enhanced if the non-member countries views are also incorporated.[108] This partnership between the FSB and the IMF is a first step towards addressing this concern. However, the involvement of the IMF does not deal with the existing weaknesses in the international financial architecture because the IMF itself has been subject to extensive criticism on legitimacy grounds, most recently because of its allocation of SDRs and the related allocation of weighted voting rights. Further, the IMF policies are

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[104] Joseph E. Harrington, Yannis Katsoulacos, *Recent advances in the analysis of competition policy and regulation* (Edward Elgar 2012) 336.
[105] Ibid, 336.
[106] FSB Charter, Article 2 (h), 2; See also, IMF Factsheet, IMF-FSB Early Warning Exercise (September 16, 2015) <https://www.imf.org/external/np/exr/facts/ewe.htm> accessed 07-Feb-16.
[107] IMF - Strategy, Policy, and Review Department, 'Initial Lessons of the Crisis for the Global Architecture and the IMF' (18 February, 2009) <https://www.imf.org/external/np/pp/eng/2009/021809.pdf> accessed 07-Feb-16.
[108] Kern Alexander and others, The legitimacy of the G20 – a critique under international law (2014) 18 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2431164> accessed 21 January 2016.

influenced towards G10 advanced countries. The IMF has restructured its governance and mandates to enhance its legitimacy, and accountability, to reorient its policies towards a more holistic approach that takes account of Macro-Prudential risks in the current dynamic global financial regulatory system along with FSB.[109]

2.3.1. Comparison of FSB with IMF (Post Crisis GFRS): Macro-Prudential Regulator

The following Table [110] summarizes the IMF's and FSB's policy mandates, tools, and governance structures. The IMF provides funds and also policy framework to its stakeholders, where it raises and lends funds, engages in surveillance, and provides technical support for improving GFRS. Whereas, the FSB is an important coordinating body.[111] The FSB's attempt is to form a consensus about best practices of Micro and Macro-Prudential Regulation to representative jurisdiction (all member countries) as well as to identify vulnerabilities and regulatory gaps in the global financial system. However, the both organizations share a common purpose in sustaining financial stability by enhancing global prudential norms.[112]

[109] Ibid, 18.
[110] Garry J. Schinasi and Edwin M. Truman, 'Reform of the Global Financial Architecture' Chap 7 in Jacob Funk Kirkegaard 'and others' (eds), *Transatlantic Economic Challenges in an Era of Growing Multipolarity* (Peterson Institute Press, Peterson Institute for International Economics 2012) 128.
[111] Garry J. Schinasi and Edwin M. Truman, 'Reform of the Global Financial Architecture' (2010) Bruegel and the Peterson Institute for International Economics W P 10 - 14, 4 <https://www.piie.com/publications/interstitial.cfm?ResearchID=1674> accessed 17 January 2016.
[112] Ibid, 4.

Table D: Structure of IMF and FSB[113]

	International Monetary Fund	**Financial Stability Board**
Policy Focus	▪ Exchange rate system and balance of payments equilibrium ▪ Member country macroeconomic and financial stability ▪ Global economic and financial stability	▪ International standards and best practices for financial regulation and supervision ▪ Global financial stability
Tools	▪ Financing facility for balance of payments needs ▪ Bilateral and multilateral surveillance ▪ Technical assistance	▪ Identification/assessment of source of global financial vulnerabilities ▪ Facilitate development of remedial policies to safeguard/restore stability ▪ Facilitate coordination of member country financial system policies
Internal governance structure	▪ Board of Governor consisting of one governor and alternate for each of 187 members countries, usually the finance minister or central bank governor ▪ Executive Board in continuous session ▪ IMF Management and Staff ▪ International Monetary and Financial Committee ▪ Development Committee	▪ Plenary, comprised of G-20 central bank governor or deputies, heads or deputies of main supervisory/regulatory agency, and deputy finance minister; and high level representative of SSBs, central bank committees, IMF, World Bank, BIS, and OECD ▪ Steering Committee selected by plenary ▪ Chairperson ▪ Secretariat drawn from members
Accountability	Member country governments	G-20 heads of state

[113] Schinasi and Truman (n 110) 128.

The IMF Articles of Agreements is a formal agreement. Its objective is to promote global monetary and financial stability and cooperation. Its organization personality is distinct from its membership. Further, its institutional staff and management structure is separate from its executive boards. However, both are under the aegis of IMF's mandates. The IMF staff regularly publishes leading publications such as World Economic Outlook, Global Financial Stability Report, and policy judgments. It is done with appropriate disclaimers that the view expressed in publication are of the IMF staff and do not necessarily represent the views of the IMF as an organization."[114] Whereas, the FSB Charter is designed to promote efficient and dynamic global financial regulatory mechanism for monitoring vulnerabilities, fragility, and systemic risk. "The roles and responsibilities of the FSB chair and secretariat are to represent the views of the organization (FSB) and not of its members".[115]

3. The Role of International Monetary Fund (IMF) in GFRS

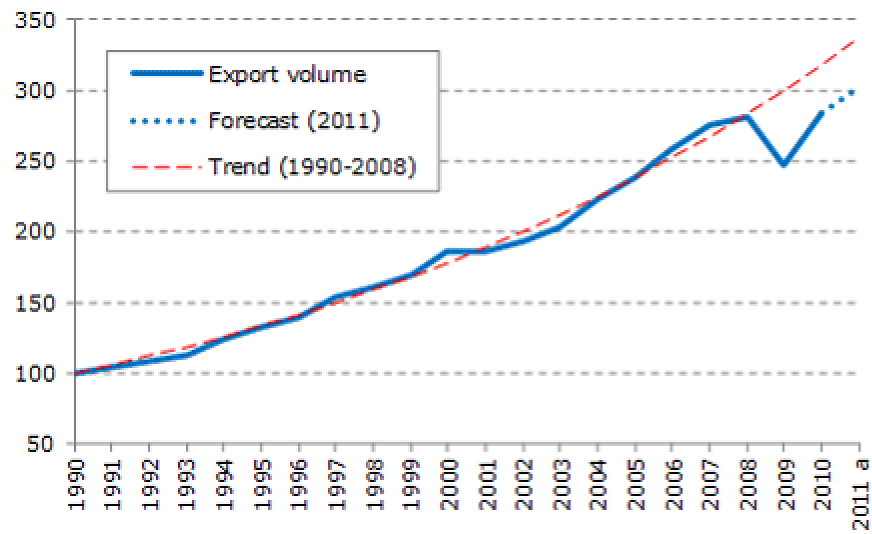
The primary purpose of IMF is to maintain stability in the exchange rate and balance of payment. Further, its surveillance mechanism supports international financial and monetary cooperation to stabilize the global financial system.[116] The Article VI Sec (3) IMF AOA[117] depict that "members may exercise such controls as are necessary to regulate international capital movements, but no member may exercise these controls in a manner which will restrict payments for current transactions or which will unduly delay transfers of funds in settlement of commitments (…)". Article VIII Sec (a) AOA[118] limits the use of the IMF's resources "[W]ithout the approval of the Fund, impose restrictions on the making of payments and transfers for current international transactions'.

The volume of world merchandise export has risen rapidly from1990's onwards (Figure VII). It has increased demand for private capital flow from trade deficit countries. Some of the deficit developing countries borrowed private capital fund over and above their absorbing capacity. Also, they were not in position to utilize IMF resources in this

[114] Schinasi and Truman (n 103) 4.
[115]Ibid, 5.
[116] The comprehensive parameters are termed in Article 1 Propose, IMF Articles of Agreement.
[117] IMF Articles of Agreement, Article VI Sec (3).
[118] IMF Articles of Agreement, Article VIII Sec (a).

circumstance.[119] So, several of the developing countries opened their capital account without following prerequisite condition, and they have faced a debt crisis in the 1980s as well as in 1990s. The global economic and financial crisis of 2007–10 also emerged in the context of global financial integration.[120]

Figure VII: Volume of world merchandise exports 1990-2011[121] [a]
Indices, 1990=100



a. Figures for 2011 are projections
Source: WTO Secretariat

The IMF holds expertise in systematic method of assessment on vulnerability and systemic risk for more than three decades. Since, 2001, the IMF has published Global Financial Stability Report (GFSR) which could identify weaknesses in the financial system. In addition, the IMF management and staff did warn about the impending global financial crisis in some of their publications and reports.[122]

[119] Edwin M Truman, 'The G-20 and International Financial Institution Governance' (2010) Working Paper 10-13 Peterson Institute for International Economics 7 <https://www.piie.com/publications/wp/wp10-13.pdf> accessed 08-Feb-16.
[120] IMF, 'IMF Annual Report 2009: Fighting the Global Crisis' [2009] 22 <https://www.imf.org/external/pubs/ft/ar/2009/eng/pdf/ar09_eng.pdf> accessed 08-Feb-16.
[121] 'WTO | 2011 Press Releases - Trade growth to ease in 2011 but despite 2010 record surge, crisis hangover persists - Press/628' (07-April-11) <https://www.wto.org/english/news_e/pres11_e/pr628_e.htm> accessed 08-Feb-16.
[122] Schinasi and Truman (n 103) 21.

3.1. Membership and Representation

The IMF membership is spread over 188[123] countries. Its membership lacks the democratic value of one country one vote status. The decision regarding funds is taken based on weighted majorities, based on quotas system, where voting shares are determined based on the countries' economic contribution or performance. This parameter excludes representation from non-G-20 members because of their low contribution in the world economy. Because of this majority Board of Governors, executive board, managing director, and other staffs are drawn from financial authorities of G-20 countries in decision making as well as day to day affairs.[124]

There has been improvement in the representation after the Seoul G-20 Summit 2010. In the current quota measurement, based on weighted average, where : (a) 50% weight to GDP; (b) 30% weight to openness; (c) 15% weight to economic variability; and (d) 5% weight to international reserve is provided. Further, GDP is measured with: (a) 60% market exchange rates and (b) 40 % PPP exchanges rates[125]. To minimize dispersion, they have included compression factor in the calculation. There is a discrepancy between the largest SDRs quota receiver i.e., US with SDR 42.1 billion (around $ 58 billion) and smallest share i.e., Tuvalu with SDR 1.8 million (around $2.5 million) as on 22 January 2016[126]. However, since the quotas are vital determinants for representative countries voting power in IMF decisions, it should be based on the principle of fair, just or equitable representation.[127]

With regard to new membership of IMF[128], the new member has to pay one-quarter of its quota in the form of hard currency (U.S. dollar, euro, yen or pound sterling) or SDRs whereas remaining three-quarters are paid in country' legal tender. The 14th General

[123] IMF, 'List of Members' Date of Entry' (13 June, 2012) <https://www.imf.org/external/np/sec/memdir/memdate.htm> accessed 08-Feb-16.
[124] Schinasi and Truman (n 103) 22.
[125] IMF, 'Factsheet -- IMF Quotas' (27January, 2016) <http://www.imf.org/external/np/exr/facts/quotas.htm> accessed 08-Feb-16.
[126] IMF, 'Acceptances of the Proposed Amendment of the Articles of Agreement on Reform of the Executive Board and Consents to 2010 Quota Increase' (22 January, 2016) <http://www.imf.org/external/np/sec/misc/consents.htm> accessed 08-Feb-16.
[127] IMF (n 125).
[128] IMF, 'Factsheet - Where the IMF Gets Its Money' (29-Sep-15) <https://www.imf.org/external/np/exr/facts/finfac.htm> accessed 10-Feb-16

Review of quota agreed to double SDR to 477 billion (about US$733.9 billion)[129] in 2010. In this increased quota, around 6 % additional stake to emerging or developing economies and around 6 % additional stake for poor income countries have been allocated.[130]

3.1.1. Gold Holdings: The gold holdings valuing at 90.5 million troy ounces (2,814.1 metric tons) is held by IMF. It makes IMF one of the largest official holders of gold in the world. The IMF's Articles of Agreement strictly limit the use of this gold. If 85 percent majority of total voting powers agree, the IMF can sell or receive gold payment by member nation otherwise, sale of gold is restricted for the commercial purpose. However, it has a sale of 403.3 metric tons of gold (about 1/8 of its holdings) as authorized by the Executive Board in September 2009. This gold was sold to safeguard market disruption. This selling led to a profit of SDR 4.4 billion which was set up as endowment as part of IMF's new income framework for institutional finance.[131] The executive board sanctioned the first distribution of SDR 700 million from windfall gold sales profits, where 90% was distributed for the Poverty Reduction and Growth Trust (PRGT) as per the conditions.[132]

3.1.2. Borrowing Arrangements

The IMF maintains two borrowing arrangements: New Arrangements to Borrow (NAB) and the General Arrangements to Borrow (GAB). The total borrowing capacity is SDR 370.0 billion (about $520 billion) approximately. The executive board approved a proposal to expand SDR to 367.5 billion with addition of 13 new representative members in 2011. In 2012, the Euro area financial situation deteriorated where various countries borrowed from IMF. As on September 2015, 33 agreements worth $379.7 billion effective

[129] Based on the current market exchange rate, which was 0.649724 SDRs to the U.S. dollar on December 15, 2010.
[130] IMF, 'Press Release: IMF Board of Governors Approves Major Quota and Governance Reforms' (16-Dec-10) <https://www.imf.org/external/np/sec/pr/2010/pr10477.htm#P24_1651> accessed 10-Feb-16
[131] IMF, 'Factsheet - Gold in the IMF' (29-Sep-15) <http://www.imf.org/external/np/exr/facts/gold.htm> accessed 10-Feb-16.
[132] Ibid.

were in operation. This bilateral funding serves as a second line of defense to quota and NAB resources.[133]

3.2. IMF Surveillance Framework[134]

The IMF monitors global financial policies of its member countries. This technical assistance is known as surveillance. The process of monitoring takes place at individual country's level including at the international level. The surveillance mechanism demonstrates possible risks and guides suitable policy measures to maintain stability and sound global financial environment. In the era of global financial integration, where the policies of one country typically affect many other countries, international cooperation is essential.[135]

The expert panel from IMF interacts regularly on an annual basis to exchange ideas with among members. It discusses and deliberates issues relating to exchange rate, Macro-Prudential Regulation, fiscal and monetary policies to enhance their economic efficiency and address concern of structural bottlenecks.[136]

The IMF oversees the bigger world picture by monitoring global and regional economy. It intends to moderate the effect of spillovers on account of different policies and practices prevailing in member countries which should not cost the world economy.[137] Its regular publications of World Economic Outlook (WEO),[138] Global Financial Stability Report (GFSR),[139] Fiscal Monitor,[140] and Regional Economic Outlook Reports[141] are tools for multilateral surveillance. It works together closely with G-20 economies for global

133 Ibid.
134 IMF, 'Factsheet -- IMF Surveillance' (23-Sep-15) <https://www.imf.org/external/np/exr/facts/surv.htm> accessed 09-Feb-16.
135 Ibid.
136 IMF Articles of Agreement, Article IV Sec 3 (b), Article VIII Sec 7 detailed about IMF Surveillance process.
137 IMF, 'Factsheet - Strengthening Surveillance - Lessons from the Financial Crisis' (23-Mar-16) <http://www.imf.org/external/np/exr/facts/refsurv.htm> accessed 26-May-16.
138 The WEO provides detailed analysis of the world economy and its growth prospects, addressing issues such as the macroeconomic effects of global financial turmoil.
139 The GFSR assesses global capital market developments and financial imbalances and vulnerabilities that pose risks to financial stability.
140 The Fiscal Monitor updates medium-term fiscal projections and assesses developments in public finances.
141 Regional Economic Outlook reports provide more detailed analysis for major regions of the world.

economic cooperation by providing mutual assessment process after the global financial crisis.[142] Its spillover reports[143] focus on cross-border interlinkage in financial policies and other economic policies. Its Global Policy Agenda[144] provides a framework for policy advice and anticipates and share the future agenda with its member countries to maintain stability in GFRS.[145]

3.3. Financial assistance

The IMF's instruments developed to institutionalize efficient international monetary lending and financial assistance for macroeconomic surveillance based on dynamic issues and challenges in global finance. However, its prime focus is on lending operation with regard to stabilizing the balance of payment.[146] Its financial support programs are based on conditionality clause where the member countries have to implement structural adjustment program as suggested by IMF. It has fixed the liquidity problem in global financial crisis by increasing resources up to $ 500 billion in April 2009.[147] The IMF also supports the less developed countries through the mechanism of Poverty Reduction and Growth Trust (PRGT) where intest free Rapid Credit Facility (RCF) are provided during financial crisis, natural disaster, and immediate financing in fragility.[148]

3.4. Governance and organization

The IMF is responsible and accountable to 188 member countries. In its governance structure, the highest decision authority is the Board of Governors followed by the Executive Board, Managing Director, and staff. The Board of Governors meet annually with IMF-World Bank jointly.[149] Its regular affair is looked after by its executive boards.

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142 IMF 'Factsheet - Strengthening Surveillance' (n 137).

143 International Monetary Fund, 'IMF Multilateral Policy Issues Report: 2014 Spillover Report' [29 July, 2014] 7 <http://www.imf.org/external/np/pp/eng/2014/062514.pdf> accessed 10-Feb-16.

144 IMF and IMFC, 'The Managing Director's Global Policy Agenda: Interconnections, Spillovers, and Spillbacks' [2014] 1 <http://www.imf.org/external/np/pp/eng/2014/041214.pdf> accessed 10-Feb-16.

145 IMF, 'Factsheet - The IMF at a Glance' (16-Sep-15) <https://www.imf.org/external/np/exr/facts/glance.htm> accessed 10-Feb-16.

146 Schinasi and Truman (n 103) 22.

147 IMF, 'Factsheet - IMF Standing Borrowing Arrangements' (24-Sep-15) <https://www.imf.org/external/np/exr/facts/gabnab.htm> accessed 08-Feb-16.

148 IMF, 'Factsheet - IMF Rapid Credit Facility' (16-Mar-16) <https://www.imf.org/external/np/exr/facts/rcf.htm> accessed 26-May-16.

149 Ibid.

The chairman is head of the executive board, and managing director is head of the staff. The Independent Evaluation Office (IEO) assessment has identified an accountability gap as the Fund's main weakness.[150] The IEO has set new criteria for incentive based model[151] to improve responsibility and transparency of IMF. Around 2400 staff[152] work at IMF and its overseas offices. Its universal membership promotes diverse staff who perform in areas of policy, technical, analytical, and procedural assignment.[153]

3.5. IMF and World Bank[154]

Table E: IMF and World Bank

IMF	World Bank
Mandate is to promote international monetary cooperation and provides policy guidance and technical assistance	Mandate is to promote reconstruction and long-term economic development
Provide loans and advice structural adjustment programs to solve balance of payments problems	Provide aid and financial assistance to achieve mission of poverty alleviation
IMF financial assistance is short and medium term and funded mainly by the pool of quota contributions	Providing financial funding to support countries for implementing specific projects such as building schools and health centers, providing water and electricity, fighting disease, and protecting the environment
Primarily concentrate on Macro-Prudential surveillance	Primarily providing financial services to strengthen the international financial environment
Framework for cooperation ▪ Both institutions work in partnership regularly. ▪ In 1989, they set out an agreement to ensure effective collaboration in areas of shared responsibility.	

150 IMF, 'IMF Annual Report 2009' (n 120)70.
151 Ibid.
152 IMF, 'About the IMF: Organization and Finances: Management' <https://www.imf.org/external/about/staff.htm> accessed 10-Feb-16
153 Ibid.
154 David D. Driscoll, 'The IMF and the World Bank: How Do They Differ?' (IMF, 01-Aug-96) <https://www.imf.org/external/pubs/ft/exrp/differ/differ.htm> accessed 26-May-16.

- Their coordination and harmonization take place during the Annual Meetings of the Boards of Governors of the IMF and the World Bank. They also meet as part of the Development Committee.
- They also issue joint statements and have visited several regions and countries together.
- Both staffs collaborate closely on country assistance and policy issues that are relevant to both institutions.
- The IMF assessments of a country's general economic situation and policies provide input to the Bank's assessments of potential development projects or reforms.
- In the same way, the World Bank advice on structural and sectoral reforms is taken into account by the IMF in its policy advice.
- Their Joint Management Action Plan (JMAP) in 2007 identify macro-critical sectoral issues, the division of labor, and the work needed in the coming year. A review of Bank-Fund Collaboration highlighted the importance of these joint country team consultations in enhancing collaboration.
- Since 2004, the Fund and the Bank have jointly published the annual Global Monitoring Report (GMR), which assesses progress towards the 2015 UN Millennium Development Goals (MDGs). The forthcoming GMR (2015/16) will discuss the Sustainable Development Goals (SDGs) that have replaced the MDGs as the basis for the 2030 development agenda.
- They work together to make financial sectors in member countries resilient and well regulated. The Financial Sector Assessment Program (FSAP) was introduced in 1999 to identify the strengths and vulnerabilities of a country's financial system and recommend appropriate policy responses.
- The Parliamentary Network's mission provide a platform for parliamentarians around the globe to advocate for increased accountability and transparency in International Financial Institutions and multilateral development financing. The rationale of objective of the Network are: to strengthen the understanding of the work of the World Bank Group (WBG) and International Monetary Fund (IMF) among parliamentarians; to provide a channel for parliamentarians to inform the WBG and IMF of legislative priorities on behalf of their constituents; to ensure that the voice of parliamentarians is heard on the subjects[155]. At the country level, the IMF also reaches out to parliamentarians on the committees that have oversight of economic issues.[156]

[155] 'Mission | The Parliamentary Network on the World Bank and International Monetary Fund' <http://www.parlnet.org/about/mission> accessed 10-Feb-16

[156] IMF, 'Legislators and the IMF' <https://www.imf.org/external/np/legislators/index.htm> accessed 10-Feb-16

3.6. Post-crisis Financial Sector Assessment Program (FSAP)[157]

The FSAP went for rigorous methods of stability assessment after the global financial crisis. Its assessment addressed issues of vulnerabilities and resilience of the financial system, supervisory framework, and financial safety nets. The IMF and the World Bank jointly conducted the Risk Assessment Matrices (RAMs) and modular FSAPs focusing on each institution's principal responsibility. It's stress tests took care of broader set of risks, spill-overs, and Macro-Prudential Frameworks.

3.6.1. Integration of FSAP into IMF surveillance

FSAP review mechanism offers valuable inputs to the IMF's broader surveillance of countries' which are covered in Article IV consultations. In 2010, the IMF made FSAP compulsory for 25 jurisdictions with systemically important financial sectors to undergo financial stability assessment under the FSAP every five years. This jurisdiction was selected based on the size and global financial integration of their financial sectors. In 2013, IMF's Executive Board revised the methodology for determining jurisdictions with systemically important financial sectors. The new method places greater importance on inter-linkages, and its applications led to an increase in the number from 25 to 29 (S29) of systemically important jurisdictions.[158]

Also, the 2014 FSAP Review discussed actions to facilitate the integration of its findings and recommendations in Article IV surveillance, particularly the use of a macro-financial filter to select among the FSAP's extensive set of Micro-Prudential and Macro-Prudential results and recommendations those to be reported in FSSAs.[159] The FSAP precision depends upon the support from the corresponding country; especially on policy-makers and supervisors to provide high-quality of data.[160] Many times the FSAP analysis of

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[157] International Monetary Fund, 'Review of the Financial Sector Assessment Program : Further Adaptation to the Post Crisis Era' [2014] IMF Policy Papers <http://www.imf.org/external/np/pp/eng/2014/081814.pdf> accessed 11-Feb-16.

[158] IMF, 'Factsheet - The Financial Sector Assessment Program (FSAP)' (21-Sep-15) <https://www.imf.org/external/np/exr/facts/fsap.htm> accessed 11-Feb-16.

[159] Ibid.

[160] International Monetary Fund, 'Review of the Financial Sector Assessment Program : Further Adaptation to the Post Crisis Era' (n 157).

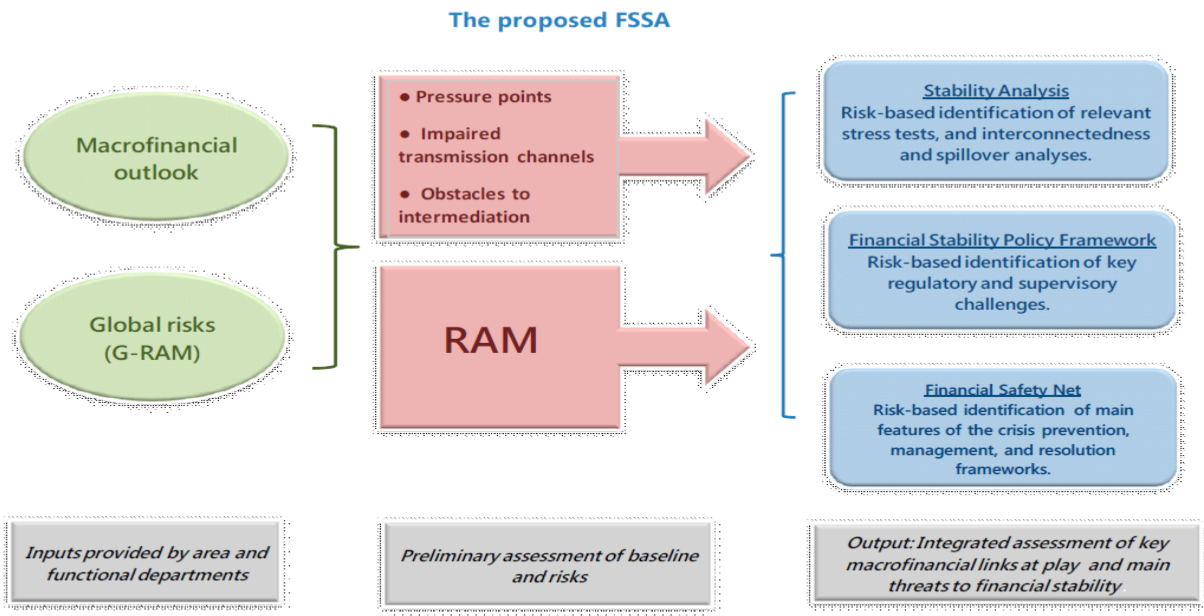
financial integration and spillovers are challenged, partly due to data inaccuracy. They try to strike a balance between pertaining risks on one hand and immediate tools for resolving the problem on the other. This exercise is meant to solve the problem of country's financial stress via examining thoroughly comprehensive assessments of compliance in relation to international standards.[161]

3.6.2. The FSAP 2014 review[162] plan aims at going forward for expansion of the coverage of stress testing tools to non-banking financial sectors. This requirement is to build up deeper analytical treatment of interconnectedness and better integration about stress tests and to arrive at a clear systematic analysis of cross-border exposure and spillovers, based on data availability.

According to Article IV, the consultations are intended by IMF-World for accessing the macro-financial health of member jurisdictions. The streamlining of the FSAP facts and finding and restructuring of FSSAs involvement in surveillance mechanism. The technical assistance on financial stability issues can be resolved through the use of the World Bank's development modules to mitigate the impact of the global systemic problem.[163] One size does not fit all. Instead of trying to impose a straightjacket formula, staff has accepted the inherent limitations in cross-country comparability and opted for ensuring transparency in models and assumptions used in FSAP stress tests through the detailed Stress Testing Matrix (STeM), included in all FSSAs since 2011.[164] The following figure[165] details the new structure of FSSAs surveillance which provides a blueprint for country-specific features.[166]

[161] 'The Financial Sector Assessment Program After Ten Years: Experience and Reforms for the Next Decade; IMF Policy Paper; August 28, 2009' <https://www.imf.org/external/np/pp/eng/2009/082809B.pdf> accessed 07-Feb-16.
[162] International Monetary Fund, 'Review of the Financial Sector Assessment Program : Further Adaptation to the Post Crisis Era' (n 157).
[163] Ibid. 6.
[164] Ibid.12.
[165] Ibid.44.
[166] Ibid.43.

Figure VIII: New Structure of FSSAs Surveillance



The Risk Assessment Model for Systemic Institutions (RAMSI) model[167] identified idiosyncratic variable from macro-financial variables. The model demonstrates comprehensive description of each financial institutions balance sheet including profit and loss account. It also uses inter-linkage modules to investigate the reaction of financial institutions to change in macro-financial situations. Estimates of interest income, non-interest income, trading income, operating expenses and credit losses are used as inputs to estimate shocks to capital in RAMSI and inputs to satellite models supporting the Systemic Contingent Claims Analysis (CCA) model.[168]

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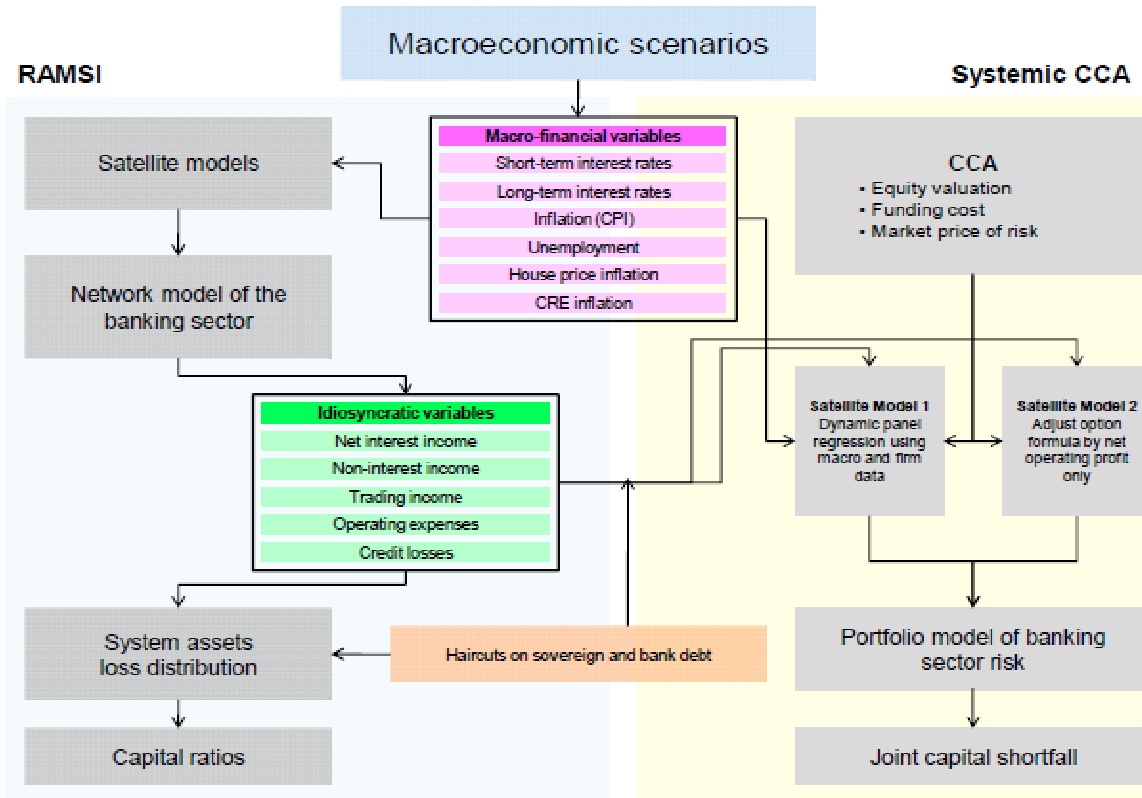
[167] IMF, 'United Kingdom: Stress Testing the Banking Sector Technical Note' [1 July, 2011] IMF Country Report 11/227 , 24 <https://www.imf.org/external/pubs/ft/scr/2011/cr11227.pdf> accessed 11-Feb-16.
[168] Ibid; In Macro-financial variable CRE Inflation is Commercial Real Estate Inflation.

Figure IX: Application of Satellite Output in the RAMSI and the Systemic CCA Stress Tests[169]



4. Reforming Financial Supervision in GFRS

The FSB has encouraged host state supervisors to participate in supervisory colleges to oversee the cross-border operations of financial groups. This supervisory college has provided a platform for sharing of information and ideas between supervisors of different jurisdictions, on global financial issues. This will help identify joint risk assessment, based on consensus, on the suitable risk-based capital buffer.[170] Their important task is to

[169] Andreas A. Jobst, Li Lian Ong and Christian Schmieder, 'A Framework for Macroprudential Bank Solvency Stress Testing: Application to S-25 and Other G-20 Country FSAPs' [2013] WP/13/68 29 <https://www.imf.org/external/pubs/ft/wp/2013/wp1368.pdf> accessed 11-Feb-16.
[170] Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' [2015] Preliminary draft, Rethinking Stakeholder Participation in Global Governance, 29. <http://www.rwi.uzh.ch/lehreforschung/alphabetisch/alexander/activities/Alexander_Global_Financial_Governance_EarlyDraft.pdf> accessed 12-Feb-16.

coordinate ongoing supervisory activities for financial group and also during emergency conditions.[171]

Further, the supervisory colleges streamline the norms for home country control, with limited host country intervention. The host financial authorities should concentrate on implementing a risk-based model of regulatory practices in international banking.[172] The host country regulatory authorities have greater decision-making power to implement macro-prudential tools to control high risk taken by international banking groups. For example, the foreign bank has to maintain subsidiaries in every jurisdiction where they have significant operations and follow minimum capital adequacy ratio in these subsidiaries. The international banking has switched to a decentralized approach for managing risks in the host state. Though, the Basel III norms are not legally binding, these norms support in restricting the supervisory authority's discretion to apply regulatory controls to a foreign bank's operations in the host country's.[173]

4. 1. Interface between Micro and Macro-Prudential Regulator

The International Association of Insurance Supervisors (IAIS) work on issues relating to insurance related institutions that are deemed "too big to fail" and SIFIs work closely with FSB. They contribute to the improved supervision of the insurance industry on domestic and international levels to maintain efficient, fair, just, safe and stable insurance markets for the benefit and protection of policyholders.[174] The International Accounting Standards Board (IASB) work on issues relating to develop and promote a single set of high-quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRS). The International Organization of Securities Commissions (IOSCO) is the international recognized body that brings together the world's securities regulators and

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[171] Kern Alexander, 'Reforming European financial supervision and the role of EU institutions' (2010) Issue 82 Amicus Curiae, 1.
<https://www.researchgate.net/profile/Kern_Alexander/publication/277943445_Reforming_European_financial_supervision_and_the_role_of_EU_institutions/links/564b117f08ae295f64512d01.pdf>

[172] Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' (n 170) 29.

[173] Ibid.30

[174] Tony Randle, 'Risk based supervision' (2009). The World Bank, Primer series on Insurance 62514, 1 <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/06/14/000333037_20110614044512/Rendered/PDF/625140NWP0Risk00Box0361486B0PUBLIC0.pdf> accessed 12-Feb-16,

is recognized as the global standard setter for the securities sector.[175] The IMF plays an active role in FSB governance and conducts Early Warning Exercises in coordination with FSB (Article 2 (h)). The Organization for Economic Co-operation and Development (OECD) promotes the global forum for transparency and exchange of information for tax purposes in the form of a multilateral framework, where, exchange of information is carried out by both OECD and non-OECD economies, since 2000. The World Bank and the IMF's preparation of FSAPs peer review mechanism is important framework to reveal the information about overall stability in the global financial system. The FSB, as a Macro-Prudential Regulator provides a platform for interaction to Micro-Prudential Regulator (IAIS, IOSCO, OECD, IASB, etc) to work out ways for Macro-Prudential Stability, by and large, bring balance in the global financial regulatory system. The following figure X describes the structure of GFRS.

Figure X: Global Financial Regulatory Framework[176]

	International Organization	**State-to-State Contact Groups**	**Transgovernmental Networks**	**Private Standard-Setting and Opinion-Making Bodies**
Example	IMF, World Bank, WTO, OECD, BIS	G-7, G-8, G-10, G-20	FSB, BCBS, IOSCO, IAIS	IASB, S&P
Characteristics	Treaty based, Large Secretariat, Policy administrating, Limited Policy making	Protocols, No secretariats, Policy-making	MOU, Small Secretariats, Information sharing, Policy coordination, Policy administration	Private sector experts
Regulatory tasks	Sovereign loans, Economic development, Technical assistance, Standards enforcement	Crisis response, Regulatory initiatives, Networks creation	Rules and standards on prudential aspects of banking, Securities, Insurance	Technical standards
Examples of achievements	FSAP	Creation of BCBS, CPMI, CGFS	Development of sectoral prudential standards	IFRS, New Supervisory Tools

[175] IOSCO, 'About IOSCO' <https://www.iosco.org/about/?subsection=about_iosco> accessed 12-Feb-16.
[176] Patrick M. Liedtke and Jan Monkiewicz, The Institutional Framework for Global Insurance Regulation and Supervision: The Changing Landscape (The Geneva Association, December 2012) 15 <https://www.genevaassociation.org/media/99499/ga2012-the_institutional_framework_for_global_insurance_regulation_and_supervision.pdf> accessed 12-Feb-16.

In Macro-Prudential Regulation, there is no one criterion or method fit for all countries.

This framework needs more time for experimentation with the gradual implementation of international standards. Further, the member jurisdiction should be given flexibility to experiment with different macro-prudential tools. Its efficacy varies in different jurisdictions given diverse financial setup.[177] The FSB, as a Macro-Prudential Regulator, along with Micro-Prudential Regulators work on soft law mechanism where the new international standards implemented are based on coordination approach with member states along with non-member jurisdictions by informing them about new standards, from time to time, as per change in GFRS.[178]

The macro-prudential ex-ante supervisory powers, include licensing, authorization, compliance with regulatory standards, and ex-post crisis management measures, like, recovery plans or support from the lender of last resort.[179] The mechanism of macro-supervision along with overseeing bailout package is required to comply with macro-prudential policies like maintaining stability in the exchange rate, interest rate, and fiscal policy. Tools of Micro-Prudential Supervision also need to be efficiently applied. The FSB/G-20 required to intervene in the financial system at an early stage to prompt corrective action and ensure compliance with regulatory standards.[180]

5. Summary

The global financial crisis revealed serious fault lines in GFRS. The crisis was not restricted to one region or state but intensely spread worldwide. The coordination of post-global financial crisis took place through G-20 countries and at the organizational level, through FSB, (from G-20 London Summit 2009) which emerged as the first comprehensive Global Macro-Prudential Regulator. The global financial institutions (IMF, World Bank and MDBs) has provided US $ 1.1 trillion finance immediately to mitigate and overcome the

[177] Kern Alexander, 'Global Financial Regulation: Recent Developments' [2010] UNCTAD Experts Meeting , 8 <http://unctad.org/sections/wcmu/docs/cIme3_2nd_ALEXANDER_en.pdf> accessed 12-Feb-16.
[178] Ibid.
[179] Edward Hida, 'Global risk management survey, ninth edition: Operating in the new normal: Increased regulation and heightened expectations' (13 May, 2015) <http://dupress.com/articles/global-risk-management-survey-financial-services/> accessed 12-Feb-16.
[180] Kern Alexander, 'Global Financial Governance Issues, Reforms, and Experiences' (n 170) 32.

counter-cyclical effect, bank recapitalization, the balance of payment problem and liquidity church.

The objective of GFRS was to strike a balance between Micro-Prudential Regulation and Macro-Prudential Regulation. The FSB is a platform of national financial regulators, central bankers, International Financial Institution (IFIs), Sector specific international supervisors and Standard-Setting Bodies (SSBs). Its mission is to ensure that national and international authorities and relevant international supervisory bodies effectively coordinate their respective responsibilities, to support international financial stability, thus improving the function of the overall markets.

The IMF membership fails to reflect the democratic value of one country one vote status. The voting right of members are based on quotas system, where voting rights are determined, based on the countries' economic contribution or performance. This parameter excludes representation from non-G-20 members because of their low contribution to the world economy. Because of this, reform was undertaken in IMF quota distribution, where the focus was given to underrepresented countries by availing them an additional 5% quota. The composition of their executive board, fund governor and staff were appointed based on a fair and merit-based process to enhance diversity. This condition applied to all international institutions. The World Bank has increased 3 % of voting power for developing and transition countries. The Mutual Assessment Process (MAP) was carried out by G-20 with the assistance of IMF, which provided an outlook of external sustainability and consistency with regard to monetary, fiscal, financial sector, balance of payment and other policies. The efforts of IMF on new Precautionary and Liquidity Line (PLL) provide more flexibility in terms of short-term liquidity facility to fundamentally strong countries facing exogenous shocks. The FSAP (IMF/World Bank) peer review has been in accordance with the FSB Core guidelines. The Non-Cooperative Jurisdictions (NCJs) has been placed in public domain based on their adherence to prudential regulations. The FSB has developed a toolbox of measures to promote adherence to prudential norms with NCJs. This process enables greater dialogue to raise compliance with international standards in all jurisdictions.

The FSB plays a key role in promoting reform in sectors such as OTC derivatives, securitization markets, credit rating agencies, and hedge funds. It has worked in close collaboration with Basel Committee to upgrade rules in the quality of capital requirement, counter-cyclical capital buffer, higher capital in off-balance sheet activities and developed a baseline leverage ratio. FSB and IOSCO jointly work to streamline centrally cleared counterparties mechanism in OTC derivatives market. It has set up more than thirty Supervisory colleges for large complex financial institutions, which meet and address issues on a continuous basis and take actions immediately so that no financial firms are deemed “too big to fail”. This supervisory college has provided a platform for sharing of information and ideas between supervisors of different jurisdictions, on global financial issues. In Los Cabos Summit, it restated and amended its Charter which reinforces certain elements of its mandate, including its role in standard setting and in promoting members’ implementation of international standards. The FSB has also accepted the G20 commitments and policy recommendations. The FSB is gradually being institutionalize as an association under Swiss law, which has provided it with the status of a legal personality under the International Economic Law.

The FSB’s ability to coordinate global financial regulation, depends on, the level of the representatives that attend the Plenary. Article 10 of FSB confirms seriousness towards policy implementation where “central bank governor or immediate deputy, head or immediate deputy of the main regulatory agency and deputy finance minister or deputy head of finance ministry are to participate in the session. Along with them, the Plenary includes the chairs of the main SSBs, a high-level representative of the IMF, the World Bank, BIS, and OECD”. The Regional Consultative Groups provide a structured mechanism for interaction of the FSB members with non-members, regarding the various FSB initiatives underway and planned. These groups promote implementation of key standards in non-member jurisdictions.

The FSB facilitates and coordinates the alignment of the activities of the SSBs to address any regulatory overlaps or gaps. It clearly demarcates the jurisdiction of specific bodies incorporating the changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure, as well as accounting and auditing. The FSB, as a Macro-Prudential Regulator provides a platform for interaction to Micro-Prudential Regulators (IAIS, IOSCO, OECD, IASB, etc) to work out ways for Macro-Prudential stability and, by and large, bring balance in the global financial regulatory system

Unlike the multilateral financial institutions, the FSB lacks a legal form and any formal power, given that its Charter is an informal and nonbinding memorandum of understanding for cooperation, adopted by its members. In fact, Article 23 cautions that the "Charter is not intended to create any legal rights and obligations," putting the onus of the implementation of any decision on peer pressure rather than on the enforcement of legal obligations. In an implicit acknowledgment of this fact, the Charter itself emphasizes the "collaborative" approach in Articles 1 and 2 of the FSB, in pursuing its objective and mandate.

The FSB in the GFRS has provided the missing link between micro-prudential regulators with the wider macro-prudential regulators, including IMF, for better coordination and harmonization. The growing significance of macro-prudential regulation has led the FSB to work in an interconnected manner with the IMF. The IMF-FSB have undertaken collaborative early warning exercises to strengthen assessments of systemic risks and provide adequate firewall and regulatory measures in response to systemic risks. The combination of the IMF's macro-financial expertise with FSB's coordination of the regulatory gaps has strengthened the IMF's information and surveillance mechanism in accordance with the broder interconnected regulatory framework, for efficient monitoring in GFRS. This framework has minimizied cost of monitoring the macro-prudential regulation.

The success of the FSB/IMF collaboration in macro-prudential regulation will determine its effectiveness, accountability and legitimacy of its standards and recommendations for countries not represented in the G20. The legitimacy and leadership of the G20 will be enhanced if the views of the non-member countries are also incorporated and the partnership between the FSB and the IMF is a first step towards addressing this concern. However, the mere involvement of the IMF will not deal with the existing weaknesses in the international financial architecture because the IMF itself has been subject to extensive criticism on legitimacy grounds, on account of its allocation of SDRs and voting rights. The IMF policies are in favour of towards G10 advanced countries. In the current times, the IMF has restructured its governance and mandates to enhance its legitimacy and accountability and to reorient its policies towards a more holistic approach.

The GFRS framework needs more time to learn from their experience, with the gradual implementation of international standards. Its efficacy varies in different jurisdiction given diverse financial setup. The FSB, as a Macro-Prudential Regulator, along with Micro-prudential regulators work on soft law mechanism. The new international standards implemented are based on coordination approach with member states, including the non-member states, by informing them about new standards, from time to time, as per changes in GFRS.

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—— 'Article 4 : Accountability and transparency.

—— 'Article 5, Members

—— 'Article 6 : Commitments of Members.

—— 'Article 9(2) : Decisions by the Plenary shall be taken by consensus.

—— 'Article 10 : Representation and attendance.

—— 'Article 11 : Seat assignments.

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Annexure 6.1 Table of Key Standards for Sound Financial Systems[181]

Area	Standard	Issuing Body
Macroeconomic Policy and Data Transparency		
Monetary and financial policy transparency	Code of Good Practices on Transparency in Monetary and Financial Policies	IMF
Fiscal policy transparency	Code of Good Practices on Fiscal Transparency	IMF
Data dissemination	Special Data Dissemination Standard/ General Data Dissemination System[182]	IMF
Financial Regulation and Supervision		
Banking supervision	Core Principles for Effective Banking Supervision	BCBS
Securities regulation	Objectives and Principles of Securities Regulation	IOSCO
Insurance supervision	Insurance Core Principles	IAIS
Institutional and Market Infrastructure		
Crisis resolution and deposit insurance[183]	Core Principles for Effective Deposit Insurance Systems	IADI
Insolvency	Insolvency and Creditor Rights[184]	World Bank
Corporate governance	Principles of Corporate Governance	OECD
Accounting and Auditing	International Financial Reporting Standards (IFRS) International Standards on Auditing (ISA)	IASB IAASB
Payment, clearing and settlement	Principles for Financial Market Infrastructures	CPMI/IOSCO
Market integrity	FATF Recommendations on Combating Money Laundering and the Financing of Terrorism & Proliferation	FATF

[181] FSB, 'Table of Key Standards for Sound Financial Systems - Financial Stability Board' <http://www.fsb.org/what-we-do/about-the-compendium-of-standards/key_standards/table-of-key-standards-for-sound-financial-systems/> accessed 12-Feb-16

[182] Economies that have, or seek, access to international capital markets are encouraged to subscribe to the more stringent SDDS and all other economies are encouraged to adopt the GDDS.

[183] The FSB supports the inclusion of one or more standards on resolution regimes under this policy area, and intends to make a selection once relevant policy development work is completed.

[184] The World Bank working with UNCITRAL and internationally recognized experts, has completed and implemented the ICR ROSC Assessment Methodology. The ICR ROSC Methodology is based on the current Creditor Rights and Insolvency Standard (ICR Standard), derived from the World Bank's Principles and Guidelines for Effective Insolvency and Creditor Rights Systems, and the recommendations are included in the UNCITRAL's Legislative Guide on Insolvency Law.

7. Challenges and Reforms in the GFRS

SCHEME OF THE CHAPTER

1. Issues and Challenges in GFRS

1.1. Constraints faced by Macro-prudential Regulation

The global financial regulatory mechanism is driven by Micro-Prudential Regulation that has concentrated on the stability of the individual financial sector. The global financial crisis revealed that the existing Micro-Prudential Regulation was ineffective in the absence of strong Macro-Prudential Regulation. The FSB along with IMF and other Micro-Prudential Regulators have taken the assignment to address systemic risk in the global financial system as a whole. However, there is a lack of strong political support, and the technical challenge has made it impossible to implement macro-prudential supervision in the true sense.[1] Further, the operation of Macro-Prudential Regulation at international level is a huge task, and there are various challenges, such as whether the macro-prudential tools will vary based on cyclical shocks, whether the regulator will intervene in all sectors or a particular sector and what are the parameters to determine the particular sector, how will the issue of sovereignty be addressed while intervening with regard to non-member jurisdiction? It is hard to reach consensus on these questions because measures the work in one jurisdiction may not be suitable in another jurisdiction. Further, it is also challenging to get evidence of different instruments their result and outcome. The complex queries in GFRS will be tested, based on trial and error method, till it finalizes based on concrete evidence and facts.[2]

Symmetric information is the essential condition for the executor, implementer, supervisor, and market participants in the financial system to avoid any other information gap in the systems. Due to bilateral treaties, confidential information are not accessible, which is required for surveillance function. There are serious doubts regarding confidentiality and secrecy clause required in financial matters.

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[1] Andrew Baker, ''Mandate, Accountability and Decision Making Issues to be faced by the FSB'', *Stephany Griffith-Jones* Stephany Griffith-Jones, Eric Helleiner and Ngaire Woods (ed), 'Special Report - The Financial Stability Board: An Effective Fourth Pillar of Global Economic Governance?' (2010) <https://www.cigionline.org/sites/default/files/FSB%20special%20report_2.pdf> accessed 13-Feb-15.

[2] Andrew Baker (n 1).

1.2. Constraints faced by Micro-Prudential Regulation

There is a difficulty in supervising unstable and volatile capital flow. This volatility provides greater scope for negotiation between advanced countries and the emerging countries for continuous coordination and involvement through proper channel. The existing Micro-Prudential Regulations are insufficient to address the concern of unstable capital flows. Maintaining high level of international reserve as an outcome of capital account convertibility, is not the solution to the issue of volatility capital flow. In fact, the IMF, FSB, and all the Micro-Prudential Regulators have pursued the mandate of promoting and incentivising capital flow without sufficiently streamlining safeguards, guidelines and standards. This has completely ignored the concern of developing and emerging countries. It is clear that in the past Asian Financial crisis, Latin American crisis and global financial fiasco (2008) occurred due to capital flight and international financial integration. Further, there are substantive policy challenges related to the field of Systemically Important Financial Institution (SIFI), shadow banking and OTC derivatives market where global consensus and agreement need to be achieved with due process of sharing information about the regulatory gap to implement the regulation based on agreed timeline.

1.3. Soft Law

Although the GFRS faces issues of weak compliance, there is a consensus within a number of countries to implement some common or minimum level of rules and regulation. In the light of enforcement, most agreements are informal and soft law in nature, so there is clear need to attempt to agree on any formal treaty, convention or similar formal instrument in international law. The standards and principles in place suffer from associated operational limitation of weak compliance. The compliance mechanism needs to shift from consensus-based model to rigorous compliance as done by WTO Dispute Settlement Panels or hard international law. Also, the GFRS is not backed with funding or resource assurance. So, there is no incentive for the countries to implement horizontal and symmetrical enforcement of standards. Though each country differs according to its size, economic features, and priorities, it is hard to impose straight-jacket formula without considering its cross-country requirement.[3] The soft financial norms can create the problem of 'regulatory arbitrage'.[4]

1.4. Challenges of FSB and IMF in GFRS

The FSB's initial collaboration with the IMF was mutually reinforcing by way of drawing on the respective strengths of the two institutions. The FSB has enhanced its accountability and transparency to stakeholders in the GFRS. Also, the IMF has gained greater trust from central bankers and financial regulatory authorities. Though IMF and FSB are different organizations, they are overlapping in their mandates, goal, mission and objective. This partnership has to qualify several litmus tests in the upcoming years. There is a possibility that more collaboration between the two institutions will create the problem of shifting accountability towards one another. Nevertheless, in the backdrop of international financial integration, both institutions have been challenged on financial stability and sustainability front.[5]

The FSB and IMF partnership on developing an early-warning system to prevent a repeat error in the global financial system is a good initiative. However, their coordination work remains much on paper. The nature of this task requires both to work together, but their different locations, size, and organizational cultures, along with a cooperative framework, is missing. Still, the evolved form of the two institutions, it is at a preliminary stage without taking any test of financial shocks.[6] In addition, the FSB peer review process on the lines of IMF-World Bank and OECD lacks seriousness with respect to the recipient country because the receiving country has veto power on the result of the report. As a

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[3] International Monetary Fund, 'Review of the Financial Sector Assessment Program: Further Adaptation to the Post Crisis Era' (September 2014) , 12 <http://www.imf.org/external/np/pp/eng/2014/081814.pdf> accessed 18-Feb-16.

[4] A practice whereby firms capitalize on loopholes in regulatory systems in order to circumvent unfavorable regulation. Arbitrage opportunities may be accomplished by a variety of tactics, including restructuring transactions, financial engineering and geographic relocation; See, INVESTOPEDIA, 'Regulatory Arbitrage Definition | Investopedia' <http://www.investopedia.com/terms/r/regulatory-arbitrage.asp> accessed 14-Feb-16.

[5] Garry J. Schinasi and Edwin M. Truman, 'Reform of the Global Financial Architecture'' (2010) W P 10 - 14 Bruegel and the Peterson Institute for International Economics , 45 <http://www.iie.com/publications/wp/wp10-14.pdf> accessed 13-Feb-16.

[6] Momani, B. 2010. "The IMF and FSB: Intractable Political Reality and Organizational Mismatch." In *The Financial Stability Board: An Effective Fourth Pillar of Global Economic Governance?* edited by S. Griffith- Jones, E. Helleiner, and N. Woods. Waterloo, Ont.: CIGI. Available at www. cigionline.org.

result, the peer review process becomes a futile exercise, without concrete implementation of specific standards by the reviewed countries.

In the World Economy, the entries of new players, such as the emerging economies (BRICS) and smaller offshore international financial centers such as Singapore, Malaysia, Hong Kong and others. There still exist the necessity to rebalance representation making it more inclusive and universal in the global financial regulatory mechanism.

The FSB lacks a legal form and any formal power. The FSB's Charter is an informal and nonbinding memorandum of understanding for cooperation adopted by its members. In fact, Article 23 cautions that the "Charter is not intended to create any legal rights and obligations," putting the onus of the implementation of any decision on peer pressure rather than on the enforcement of legal obligations.[7] In an implicit acknowledgment of this fact, the Charter itself underscores the "collaborative" approach in Articles 1 and 2 of the FSB in pursuing its objective and mandate.[8] Moreover, the FSB lacks institutionalization capacity, given the currently employed staff of approximately 20 members, one is inclined to question the proportion of the task assigned, and resources provided, notwithstanding the extensive involvement of FSB's members in the organization's activities. In fact, FSB cannot be compared with IMF, World Bank, EU, OECD, and WTO, which employ a staff of a few hundred or thousand.

The FSB and its members appear determined to retain more control of the process. Moreover, there seems to be greater emphasis on the need to raise standards and to enhance voluntary compliance with the world (carrot vs. stick). However, the aim to foster compliance among Non-Cooperating Jurisdictions could be weakened, if the FSB relies on its Plenary to serve as the ultimate judge of noncompliance. A better alternative would be for an expert panel to pass an opinion. The panel's rulings could then legitimate

[7] Sheng, A. 2009. "Session 8: Financial Crisis and Global Financial Governance: A Network Analysis." <www.growthcommission.org/storage/cgdev/ documents/sheng.pdf.> accessed 18-Feb-16.

[8] Baker, A. 2010. "Mandate, Accountability and Decision- Making Issues to Be Faced by the Financial Stability Board." In *The Financial Stability Board: An Effective Fourth Pillar of Global Economic Governance?* edited by S. Griffith-Jones, E. Helleiner, and N. Woods. Waterloo, Ont.: CIGI. Available at www. cigionline.org.

collective or individual sanctions by FSB members, though this proposal is fraught with difficulties (Helleiner 2010).[9]

The FSB should provide a forum for information disclosure so that market actors and financial authorities could have most recent information related to short-term capital flows, interest rate, and international investment. This would harmonize national norms with international norms. The Micro-Prudential Regulators such as International Accounting Standard Committee (IASC), the International Organization of Securities Commission (IOSCO), the Basel Committee on Banking Supervision along with the FSB have made significant efforts in the adoption of general disclosure in public companies, financial institutions and other stake holders. This increase in depth and width of electronic international trading has created the challenge and an opportunity to standardize the electronic business.

The IMF must engage more with central banks and finance ministries because of the more widely acknowledged close interlinkages and policy challenges, in simultaneously achieving and safeguarding both macroeconomic and financial stability. As the global crisis demonstrated, an irrational argument of central bank independence, in the narrow pursuit of macroeconomic stability, has become inconsistent institutionally with the need to rely on macroeconomic instruments to repair the financial system. Indeed, the degree of inconsistencies will depend on the specific mandate of a particular central bank. The IMF management and staff should use the FSB to engage with central bankers collectively on these issues. The IMF undertake surveillance to monitor compliance of member states which have obtained credit from IMF on grounds of conditionality clause encompassing the Structural Adjustment Programme (SAP). The SAP has been challenged on various occasions. The conditionality clause is arbitrary and discriminatory for advanced countries and least developed countries. Also, the parameter of clause varies from country to country. For better uniformity, the target should be given based on overall capacity of countries. They should be nurtured to noncompliance jurisdictions, if they face genuine difficulty in complying with international standards or are over

[9] Stephany Griffith-Jones, Eric Helleiner and Ngaire Woods (ed) (n 1)

ambitious according to their present conditions. This approach will enhance the presence of IMF and increase universal membership worldwide.

2. World Financial Organization / Supra Global Financial Regulator

The notion of a supra global financial regulator replacing the international soft law regime along the lines of EU regulation, looks impossible in the existing framework. However, the supra regulator can substantially influence sovereign supervision and regulatory decision in multi-jurisdiction where membership is universal across the globe regardless of size, and economic contribution. The supra global financial regulatory, variously named by number of renowned economists as a World Financial Organization (WFO) or World Financial Authority (WFA) (Kern Alexander and others, 2014).[10] The idea of World Financial Organization (WFO) looks far-fetched from current existing reality,[11] however, the actions of FSB are moving towards the role of a global financial regulator or International Macro-Prudential Regulator, which will take time to mature within the next ten years.

2.1. The Framework of WFO

The World Financial Organization should have the power to make agreements with domestic financial authorities on behalf of Micro-Prudential Regulator. These agreements may be used for further exchange of information for investigation and enforcements in multi-jurisdictions.[12] The global financial regulator receives a request for information from a third party; the request is consulted with the supervisor by first soliciting its views on the propriety of releasing such information. Prior consent will be[13] obtained from the supervisor that originated the information, if consent is required by the laws or regulations of that country. It is understood that the supervisor will cooperate in seeking

[10] Kern Alexander and others, 'The legitimacy of the G20 – a critique under international law' (2014) 19 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2431164> accessed 21 January 2016.
[11] Erik Denters, 'Regulation and Supervision of The Global Financial System: A Proposal for Institutional Reform' (2009) 1(3) Amsterdam Law Forum 63 <http://amsterdamlawforum.org/article/download/84/136> accessed 13-Feb-16.
[12] The European Commission, 'Supplemental Statement of Cooperation on the Exchange of Information for the Purposes of Consolidated Supervision' [17 September, 1999] , 5 <http://ec.europa.eu/internal_market/bank/docs/thirdcountries/eu-us-coop2_en.pdf> accessed 13-Feb-16
[13] Ibid.

to preserve the confidentiality of the information to the extent permitted by law.[14] There is a proposal for creating a central payment and clearing system in cross-border transaction. The WFO can provide a single linkage for international financial transaction worldwide.[15]

The severity of domestic regulation varies from one jurisdiction to another jurisdiction. The less stringent jurisdiction provide an incentive for riskier activities compared to the stringent jurisdiction. Because of global financial integration, the global financial instruments operate worldwide which makes regulating difficult within the existing regulatory framework. There is requirement of a jurisdictional competent global regulator in the financial system as a whole. Due to inter-linkage or cross-jurisdiction, the WFO requires jurisdictional competence to prevent market failure, market abuse and financial offense at the global level.[16]

The WFO provides guidelines for multinational financial institutions to the national jurisdiction so that national jurisdiction comply with global norms. The complete information avoids falseness in the practice of international standard in the national jurisdiction. Symmetric information is an essential condition for both the executor and implementer. Moreover, the supervisor should be better informed along with market participants to avoid any kind of confusion later on. On the other side, due to bilateral treaties, confidential information are not accessible which is required for surveillance function. Legal privilege and immunities should be given to international regulators for the disclosure of confidential information for better investigation purpose. In fact, accurate information about markets will improve legitimacy in GFRS.

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[14] Ibid.

[15] Kern Alexander, 'The Role of the Basle Standards in International Banking Supervision' (2000) Working Paper No. 153 ESRC Centre for Business Research, University of Cambridge , 17 <http://www.cbr.cam.ac.uk/fileadmin/user_upload/centre-for-business-research/downloads/working-papers/wp153.pdf> accessed 13-Feb-16.

[16] Kern Alexander, 'The need for efficient International Financial Regulation and the role of a Global Supervisor' in Eilís Ferran and Charles Goodhart (ed), *Regulating Financial Services and Markets in the 21st Century* (Hart Pub 2001) 275.

2.2. Principle of legitimacy in WFO

In the cross-border financial transactions, the nature of disputes will be of a multi-jurisdiction nature. These require the verifying state to enact legislation that imposes jurisdiction not only on violations but also involves acts or omission that occur in other territorial jurisdictions. However, this has affected the financial market of the sanctioning state. The onus lies on national regulatory authorities to be competent to prosecute regulatory breaches or offences in which elements of the violation have occurred in foreign jurisdictions as well as in the territory of the prosecuting state. The WFO should take the lead in the enforcement effort and bring consistency and coherence. In transnational set-up of financial conglomerates, there will be difficult legal issues such as lifting the corporate veil in cases of corporate breach, attributing liability to controlling third persons or to those who are knowingly concerned, and questions of double and multiple jeopardies in criminal cases.[17]

The present international standards are implemented based on consensus approach. It is voluntary in nature where the initiative lies with national authority with some flexibility. However, the WFO's approach on the implementation of international standards are stringent, rigid and time-bound manner. The WFO will continue amending and updating rules and regulation as per the dynamics in GFRS. The authority of WFO will be questioned based on legal and political sovereignty issues where state sovereignty is handed over to the WFO. The idea of the set-up of supranational authority will infringe upon the power of national authorities to monitor financial system.[18] The legitimacy of WFO depends upon real substance and utility based on the principle of the rule of law.[19]

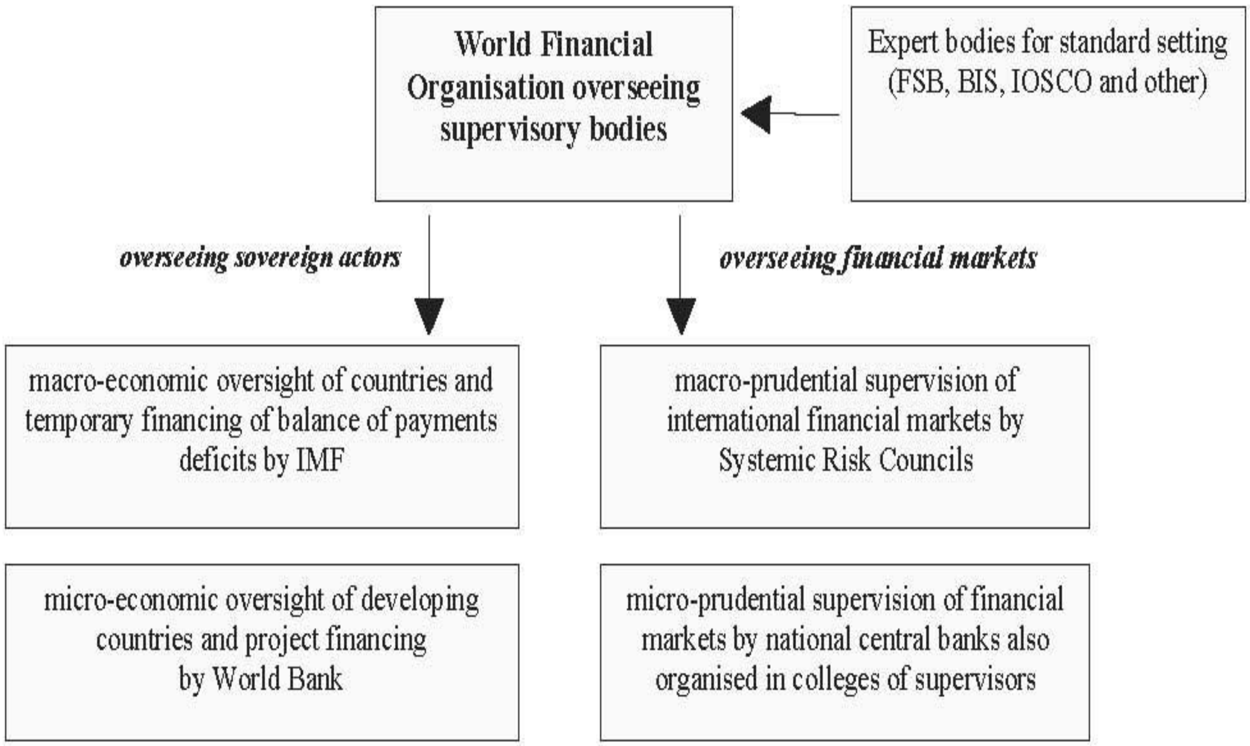
[17] Jonahtan Clough, 'Punishing the Parent: Corporate Criminal Complicity in Human Rights Abuses' (2008) 33(3) Brooklyn Journal of International Law, Syposium : Corporate Liability for Grave Breaches of International Law , 923 <http://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1203&context=bjil> accessed 19-Feb-16.

[18] Kern Alexander, 'The Role of the Basle Standards in International Banking Supervision' (n 15)

[19] 'Chapter Global Administrative Law-americanbar.org', 3 <http://www.americanbar.org/content/dam/aba/publications/administrative_regulatory_law_newsletters/international_law.authcheckdam.pdf> accessed 13-Feb-16.

2.3. Supra global financial regulator/ World Financial Organization (WFO)[20]

Figure I: World Financial Organization (WFO)



[20] Erik Denters (n 11) 73.

2.4. Actors in Financial Market Regulation / Supervision[21]

Table A : Stakeholders in GFRS

Micro/Macro-Prudential Supervisors	Objective	Composition
International Monetary Fund	oversee macroeconomic policies of member countries and developments in the global economy, provide a balance of payments support to members in need	virtually universal membership of countries represented by central bank or treasuries
International Bank for Reconstruction and Development	oversee microeconomic policies of developing countries through the poverty reduction strategy process; project financing in development countries; encourage foreign direct investment	virtually universal membership (membership open for IMF-members only)
Bank for International Settlements	promote discussion and policy analysis among central banks and within the international financial community; provide a Centre for economic and monetary research; participate in financial transactions and operations	central banks or monetary authorities of Algeria, Argentina, Australia, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, the Republic of Macedonia, Malaysia, Mexico, the Netherlands, New Zealand, Norway, the Philippines, Poland, Portugal, Romania, Russia, Saudi Arabia Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, the United Kingdom, the United States, and the ECB
G-20	promoting open and constructive discussion between industrial and	informal group of finance ministers and central bank governors of 19

[21] Ibid. 81-82.

	emerging-market countries on key issues related to global economic stability	countries: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States of America and the European Union, plus representatives of IMF and IBRD
FSB	access vulnerabilities, promote coordination, monitor and advise on market developments, undertake joint strategic reviews, set guidelines for supervisory colleges, support cross-border crisis management, collaborate with IMF on early warning	informal group of G-20 national financial authorities and standard setting bodies (central banks, regulators and finance ministries) plus Australia, Hong Kong, Netherlands, Singapore and Switzerland and international financial institutions
Colleges of supervisors	permanent but flexible structures for cooperation and coordination among the national supervisors involved in the supervision of significant cross-border banking groups	national supervisors; composition of a college depends on the banking group to be supervised.
National Central Banks and other domestic supervisors	promote stability through money supply, interest rates, short-term credit; provide micro-prudential oversight by regulating and supervising national financial markets; however, mandates may differ depending on political priorities	not applicable
Coordinating international bodies: BIS Committee on Banking Supervision, The International Organization of Securities Commissions, and the International Association of Insurance Supervisors.	develop common standards for supervision to be implemented by domestic supervisors	national regulators; various compositions
European Systemic Risk Council and other systemic risk councils	exercise macro-prudential supervision over the financial system as a whole; protects the overall economy from collapse by giving early warning signals in case of systemic risks	systemic risks councils do not exist yet; proposed by the de Larosière Group, G-20

3. Reform in global financial regulatory mechanism

3.1. Restructuring in IMF and FSB

The prime responsibility of IMF and FSB as Macro-Prudential Regulatory Bodies is to facilitate coordination and harmonization[22] of best regulatory standards, codes and practices among member jurisdictions as well as non-member jurisdictions. Both institutions should be emboldened to facilitate the dialogue so that regulatory leakages and global externalities can be addressed. The IMF can play a role along with FSB's supervision in connection with global finance to ensure stability and sustainability.[23]

There is a need for institutional governance reform in the case of the FSB. Its governance structure has been streamlined on the strength of their sound permanent institutional footing and funding. The FSB is a treaty-based inter-governmental organization and has not evolved to an appropriate legal form. For evolving a legal personality, the member nations have formed an association under Swiss law and also developed appropriate Articles of Association for governance purpose. Further, it has adopted Rules of Procedure to improve its internal governance and transparency and to bring about an element of standardization in its internal processes.[24] The FSB should gradually obtain immunities by operating as an association under the BIS Headquarters Agreement. It will be evaluated towards the end of a period of five years, as to whether to entitle it to specific immunities and privileges that will be decided based on the contribution of FSB by the end of 2016.[25]

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[22] Garry J. Schinasi and Edwin M. Truman (n 5) 46.

[23] This kind of arrangement need not apply in all cases; for example, the key players on some issues may include only a small set of countries, and it is not clear that the presence or active engagement of a mediator or facilitator would advance the process. Recall that the Basel I capital standard was built on a bilateral agreement between the US and UK authorities after the Basel Committee on Banking Supervision demonstrated its inability to come to grips with the issue.

[24] FSB, 'Report to the G20 Los Cabos Summit on Strengthening FSB Capacity, Resources and Governance' <http://www.fsb.org/wp-content/uploads/r_120619c.pdf> accessed 06-Feb-16.

[25] FSB, 'Report to the G20 Los Cabos Summit on Strengthening FSB Capacity, Resources and Governance' (18 June 2012) , 3-4 <http://www.fsb.org/wp-content/uploads/r_120619c.pdf> accessed 16-Feb-16.

3.1.1. An open and integrated global financial system

The evidence suggests that the reforms have helped to avoid significant retrenchment and market fragmentation, which has been a common feature of the past financial crises. On the one hand, direct cross-border lending, as a share of total banking assets has declined, primarily because of retrenchment by European banks. A combination of bank clean-up and exit from certain market segments, reduced risk appetite, tighter regulatory rules and adverse regional macroeconomic factors has contributed to this outcome.[26] On the other hand, the share of banking assets represented by local lending by foreign bank affiliates has remained relatively stable; new actors have filled some of the gaps, resulting in greater intra-regional financial linkages;[27] and international bond issuance by non-financial corporates has continued to grow. The FSB and SSBs are working to promote an open and integrated system by monitoring implementation of agreed reforms and by developing approaches to deeper cross-border cooperation.

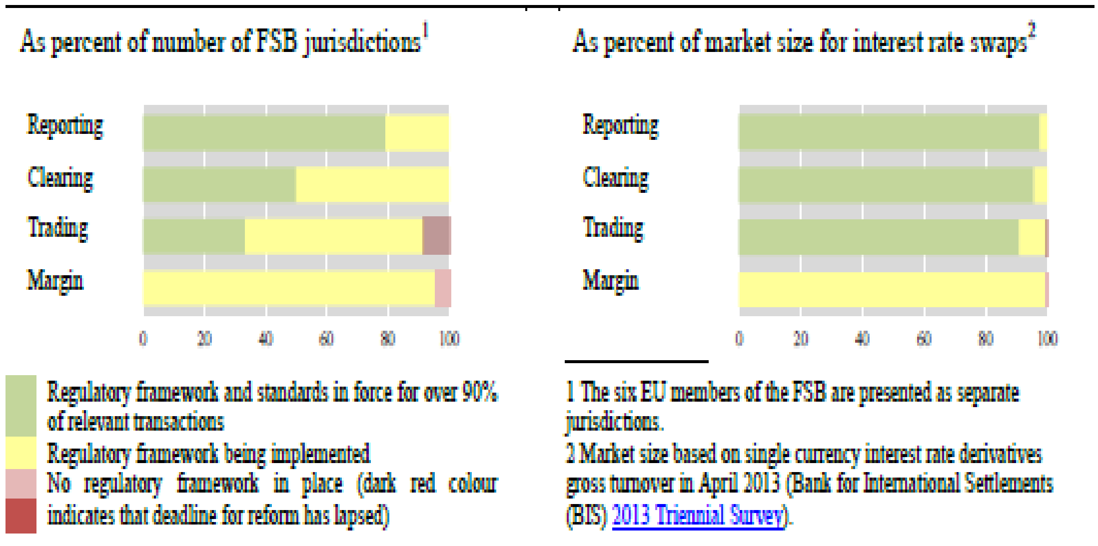
3.2. Full, Consistent and Prompt Implementation of Agreed Reforms by FSB Jurisdiction

There are progressive statistics on implementation of agreed reforms of the OTC derivative markets. The implementation of guidelines for trade reporting, central clearing, trading framework, and margin requirement in OTC derivative markets are estimable. All the FSB jurisdictions, excluding three, have implemented trade reporting guidelines. Over 90% of market i.e., 12 jurisdictions have implemented central clearing system. The eight jurisdictions have a mechanism of exchange or standardized platform for derivatives trades. Most of the jurisdictions are in the primitive stage to implement margin requirement and will gradually implement margin requirement till 2019.[28] The

[26] Committee on the Global Financial System, 'EME banking systems and regional financial integration' (March 2014) <http://www.bis.org/publ/cgfs51.pdf> accessed 16-Feb-16.
[27] IMF, 'GFSR : Ch 2 - International Banking After The Crisis: Increasingly Local And Safer?' (April 2015) ,55-89 <http://www.imf.org/External/Pubs/FT/GFSR/2015/01/pdf/c2.pdf> accessed 16-Feb-16.
[28] International Association of Potential, New and Sitting Members of the Board of Directors, 'News of the Board of Directors' [2015] 3 <http://www.members-of-the-board-association.com/Board_of_Directors_News_February_2015.pdf> accessed 15-Feb-16.

charts below show the status of implementation as reported to G20 Leaders in Brisbane Summit (The Ninth G20 Summit on November 15-16, 2014: Brisbane Summit).[29]

Figure II: Implementation of the reform in the OTC derivatives Market[30]



3.2.1. Implementation of policies to reduce money market funds (MMFs)[31]

The reforms in MMFs include fair value approach, liquidity management, and stable net asset value (NAV). Five FSB jurisdictions (63% of the global market) have implemented the IOSCO recommendations for MMFs.

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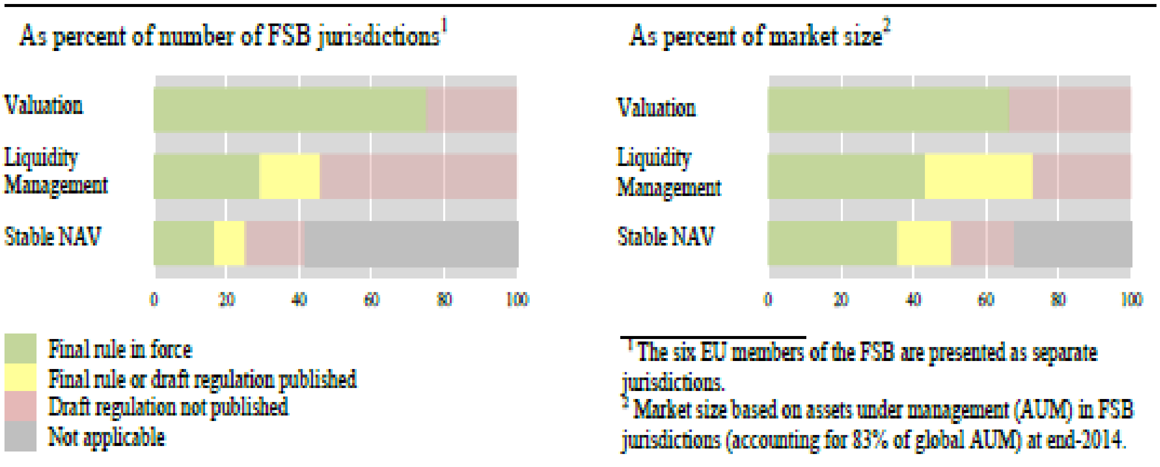
[29] 'G20 India Secretariat, History and Past Presidencies' <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> accessed 06-Feb-16.

[30] FSB, 'Implementation and effects of the G20 financial regulatory reforms: Report of the Financial Stability Board to G20 Leaders' [2015] <http://www.fsb.org/wp-content/uploads/Report-on-implementation-and-effects-of-reforms-final.pdf> accessed 15-Feb-16.

[31] Ibid.12.

Figure III: Implementation of the reform in the MMF markets[32]



The Brisbane Summit took crucial policy decision of ending the *too-big-to-fail* situation and to develop a framework for a common international norm on the total loss-absorbing capacity (TLAC) of globally systemically important banks (G-SIB) and preventing cross-border derivative contracts to avoid disruption in globally systemic bank. The total loss absorbing capacity (TLAC) for G-SIB needed an early resolution without risks to public funds.

The objective of the total loss absorbing capacity (TLAC)[33] is to remove the implicit public subsidy and re-instil private market discipline; ensure that creditors and shareholders enjoy the rewards of profits in the usual course of business, so that it will bear the costs when banks fail. It has promoted a level playing field for globally systemic banks while taking into account differences in national resolution regimes and give confidence to host nations, particularly emerging economies, that they will not be side-swiped by the failure of a large advanced-economy bank.

The success of ending *too big to fail* dilemma may never be absolute because all financial institutions cannot be insulated fully from all external shocks. However, these proposals will help change the system so that individual banks, as well as their investors and

[32] Ibid.12
[33] Ibid.

creditors, bear the costs of their own actions and the consequences of the risks they take.[34]

Further, the FSB will commence comprehensive information sharing under the policy framework for other shadow banking entities and address data gaps in the areas that inhibit regulatory cooperation. It will decide the regulatory framework for haircuts on securities financing transactions and set out details for monitoring implementation. It will process for global securities financing data collection and aggregation.[35]

In the Antalya Summit 2015,[36] the FSB has addressed the concern of legal barriers in member jurisdictions to reporting of counterparty information to trade repositories and set a deadline for jurisdictions to address them. The CPMI and IOSCO have proposed for consultation guidance on the design of a global Unique Transaction Identifier and Unique Product Identifier to aid consistent trade reporting. Moreover, the IOSCO has finalized the measures in its proposed cross-border regulatory toolkit. These will be applicable not only to OTC derivatives but also for other market regulation.[37]

3.2.2. Climate change and the financial sector

The FSB held public-private sector meetings to consider the implication of climate-related issues for the financial sector. This meeting provided an opportunity to exchange views on the impact of climate change on the financial sector.[38] However, the potential risks of the financial sector from climate change are complex, and the understanding of them is still at an early stage. The discussion identified three types of financial stability risks: physical risks (direct impacts on property or trade disruption), liability risks (which could arise if parties that have suffered damage seek compensation in the future from

[34] FSB, 'FSB Letter To G20 Leaders: Financial Reforms – Achieving and Sustaining Resilience for All' (9 November 2015) , 1-7 <http://www.fsb.org/wp-content/uploads/FSB-Chairs-letter-to-G20-Leaders-9-Nov.pdf> accessed 16-Feb-16.

[35] FSB, 'FSB Chair letter G20 Finance Ministers and Central Bank Governors: Financial Reforms – Finishing the Post-Crisis Agenda and Moving Forward' (4 February 2015) 1-5 <http://www.fsb.org/wp-content/uploads/FSB-Chair-letter-to-G20-February-2015.pdf> accessed 16-Feb-16.

[36] G20 Leaders' Communiqué, 'Antalya Summit' (15 November 2015) <http://www.consilium.europa.eu/en/meetings/international-summit/2015/11/15-16/> accessed 19-Feb-16.

[37] FSB, 'Thematic Review on OTC Derivatives Trade Reporting: Peer Review Report' (4 November 2015) , 1-56 <http://www.fsb.org/wp-content/uploads/Peer-review-on-trade-reporting.pdf> accessed 16-Feb-16

[38] FSB, 'Implementation and effects of the G20 financial regulatory reforms' (n 33) 6.

those they hold responsible) and transition risks (financial risks arising from the transition to a lower carbon economy). It is expected that all of these risks will grow with time. The discussions at the meeting frequently concentrated on the need for better information to improve understanding and analysis as well as to avoid an abrupt transition in financial markets.

FSB will develop consistent, comparable, reliable, clear and adequate disclosures so as to enable the investors and the financial industry to better assess the risks to asset values arising from climate events or the transition to a low carbon economy. One possible approach could be to establish an industry-led disclosure task force, to design and deliver voluntary standards for effective disclosures that meet the needs of investors and creditors. This would draw on the FSB's successful experience in catalyzing a private sector initiative, the enhanced disclosure task force, to improve the relevance and effectiveness of the disclosure of major banking institutions substantially.

3.2.3. Reforms in priority areas by FSB jurisdictions (as of 31 October 2015) [39]

The table provides a snapshot of the status of the progress implementation of undertaken by FSB jurisdiction across priority reform areas, based on information collected by FSB and standard-setting bodies' monitoring mechanisms. The colours and symbols in the table indicate the timeliness of implementation while the letters indicate the extent to which implementation is consistent with the international standard (Basel III) or its effectiveness is hampered by identified obstacles (trade reporting).

Figure IV: Reforms in priority areas by FSB jurisdictions[40]

[39] Ibid. 3-4.
[40] Ibid.

Reform Area	Basel III				Compen-sation	Over-the-counter (OTC) derivatives				Resolution#			Shadow banking	
	Risk-based capital	Liquidity coverage ratio (LCR)	Higher loss absorbency for G-SIBs (home jurisdictions)	Requirements for domestic systemically important banks (D-SIBs)		Trade reporting	Central clearing	Platform trading	Margin	Availability of transfer / bail-in / temporary stay powers for banks	Recovery planning for systemic banks	Resolution planning for systemic banks	Money market funds (MMFs)	Securitisation
Agreed phase-in (completed) date	*2013 (2019)*	*2015 (2019)*	*2016 (2019)*	*2016*		*end-2012*	*end-2012*	*end-2012*	*Sep 2016 (2019)*					
Argentina	△				△								**	**
Australia	C												*	*
Brazil	C			&	△									**
Canada	C					D, F							**	
China	C	△			△	R, D, F					△		**	
France	MNC	△											**	*
Germany	MNC	△											**	*
Hong Kong	C	C											**	
India	C	LC			△	D, F								
Indonesia	△					R							**	
Italy	MNC	△										△		*
Japan	C					D								
Mexico	C	C				D							**	*
Netherlands	MNC	△											**	*
Rep. of Korea						D							**	
Russia	△				△								**	**
Saudi Arabia	C	LC				R, D							*	
Singapore	C	△											**	
South Africa	C	C			△	D, F							**	
Spain	MNC	△												*
Switzerland	C				△						△	△	**	
Turkey		△				D, F							**	
United Kingdom	MNC	△											**	*
United States	LC	△			△	D								

Legend

	• **Basel III:** Final rule published or in force. • **OTC derivatives:** Legislative framework and standards/criteria/requirements (as applicable) in force for over 90% of relevant transactions. • **Resolution:** Element of resolution regime in the FSB *Key Attributes of Effective Resolution Regimes* that is implemented / in place. For the powers column, all three of the bank resolution powers (transfer, bail-in and temporary stay) are available. • **Compensation:** All FSB *Principles* and *Standards for Sound Compensation Practices* implemented. • **Shadow banking:** MMFs – Final implementation measures in force for valuation, liquidity management and (where applicable) stable net asset value (NAV). Securitisation – Final adoption measures taken (and where relevant in force) for implementing an incentive alignment regime and disclosing requirements.
△	• **Basel III:** Final rule in force, but certain elements (e.g. Basel II or 2.5 provisions, LCR disclosure rules) are not yet finalised. • **Compensation:** All except a few (3 or less) FSB *Principles* and *Standards for Sound Compensation Practices* implemented. • **Resolution:** Jurisdiction requires recovery or resolution planning for all domestically incorporated banks that could be systemically significant in failure, but applies them only for G-SIB(s) at present.
	• **Basel III:** Draft regulation published. • **OTC derivatives:** Regulatory framework being implemented. • **Resolution:** Element of resolution regime in the FSB *Key Attributes of Effective Resolution Regimes* that is partially implemented / in place. For the powers column, one or two of the bank resolution powers (transfer, bail-in and temporary stay) are available. • **Compensation:** FSB *Principles* and *Standards for Sound Compensation Practices* partly implemented (more than 3 *Principles* and/or *Standards* have not yet been implemented) • **Shadow banking:** MMFs – Draft/final implementation measures published or partly in force for valuation, liquidity management and (where applicable) stable NAV. Securitisation – Draft/final adoption measures published or partly in force for implementing an incentive alignment regime and disclosing requirements.
	• **Basel III:** Draft regulation not published (light red colour indicates deadline for reform not lapsed). • **OTC derivatives:** No regulatory framework in place (dark red colour indicates that deadline for reform has lapsed). • **Resolution:** Element of resolution regime in the FSB *Key Attributes of Effective Resolution Regimes* that is not implemented / in place. For the powers column, none of the three bank resolution powers (transfer, bail-in and temporary stay) are available. • **Shadow banking:** MMFs – Draft implementation measures not published for valuation, liquidity management and (where applicable) stable NAV. Securitisation – Draft adoption measures not published for implementing an incentive alignment regime and disclosing requirements. • **Basel III**: Requirements reported as non-applicable.

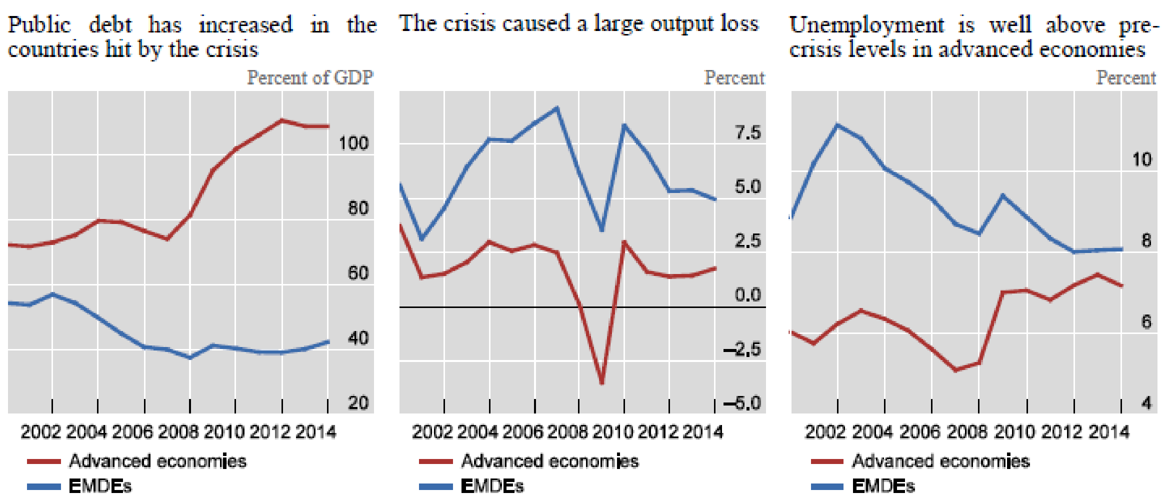
Notes

C / LC / MNC / NC	• **Basel III:** Regulatory Consistency Assessment Program (RCAP) – assessed "compliant" (C), "largely compliant" (LC), "materially non-compliant" (MNC) and "non-compliant" (NC) with Basel III rules. For the RCAP compliance scale, see http://www.bis.org/publ/bcbs264.pdf.
R / D / F	• **OTC derivatives:** Existence of legal barriers to domestic participants' reporting to trade repositories (TRs) for which cure or mitigant is not available (R); access to domestic TR data by domestic authorities other than the primary authority is not permitted, or is permitted with material conditions (D); neither direct nor indirect access to domestic TR data by foreign authorities is permitted, or is permitted only with material conditions (F). See the OTC derivatives trade reporting review report.
&	• **Basel III**: The updated status of D-SIB implementation for Brazil is based on self-reporting since the October 2015 Basel Committee progress report, and will be reviewed in the next Committee update.
#	• **Resolution:** The table assumes that all FSB jurisdictions that are EU Member States have already implemented the provisions of the Bank Recovery and Resolution Directive and (as appropriate) of the Single Resolution Mechanism.
*	• **Shadow banking:** Implementation is more advanced than the overall rating in one or more elements of at least one reform area (MMFs), or in one or more sectors of the market (securitisation).
**	• **Shadow banking:** Implementation is more advanced than the overall rating in all elements of at least one reform area (MMFs), or in all sectors of the market of at least one reform area (securitisation).

The following chart illustrates that the global financial crisis imposed tremendous costs on the global economy. These costs include much higher public debt, increased unemployment, and substantial output losses, particularly in advanced economies.

The costs of the global financial crisis have been substantiated in Figure V[41]

Figure V: Impact on global financial crisis[42]



3.2.4. Implementation status

The enactment of Basel III has largely been judicious. All 24 FSB jurisdictions have Basel III risk-based capital rules in force. The Liquidity Coverage Ratio (LCR) guidelines have been implemented in 22 jurisdictions i.e., 98% of the market. The guidelines for higher loss absorbency requirements for G-SIBs has been issued in 9 of the 10 FSB jurisdictions that have G-SIBs headquartered in them. These rules have to be in force from the beginning of 2016. Further, the guidelines on the assessment methodology and higher loss absorbency requirements for D-SIBs have been placed in 14 jurisdictions (45% of the market). However, the consistency assessments by the Basel Committee indicate that more work is needed in some jurisdictions to align national implementation

[41] Left panel: Public debt to gross domestic product (GDP) ratio for FSB jurisdictions, weighted by nominal GDP. Middle panel: Real GDP growth rates for FSB jurisdictions, weighted by nominal GDP. Right panel: Simple average of unemployment rates for FSB jurisdictions. Source: IMF, World Economic Outlook Database, April 2015.

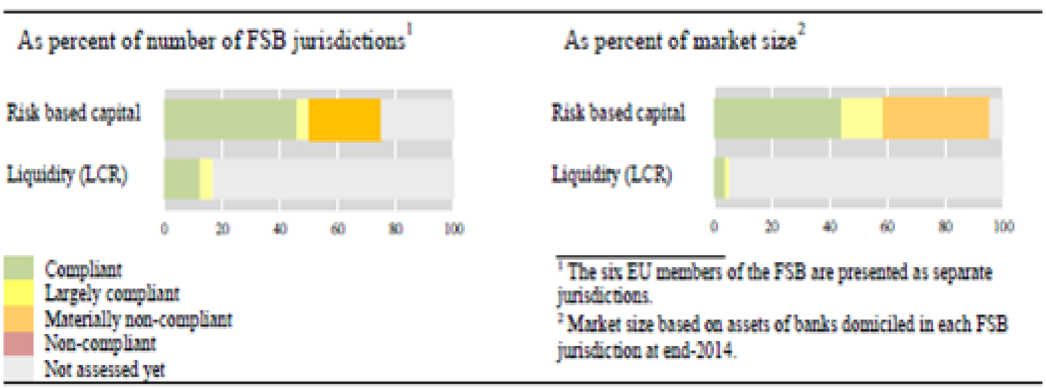
[42] Ibid.

fully with the Basel framework. All large internationally active banks now meet the fully phased-in risk-based minimum capital requirements, including the global systemically important bank (G-SIB) surcharges as applicable, and 80% of these meet or exceed the fully phased-in minimum liquidity requirements (FSB chairs letter to G20 April 2015).

3.2.5. Consistent reform in the Basel framework in most jurisdictions

- Risk-based capital rules – 19 FSB jurisdictions were assessed by the BCBS.
  - Twelve (representing 44% of the market) were found to be compliant with Basel III;
  - One (representing 15% of the market) was found to be largely compliant; and
  - Six (representing 36% of the market) were found to be materially non-compliant.
- Liquidity rules – all five FSB jurisdictions assessed by BCBS to date (representing 6% of the market) were deemed compliant or largely compliant with the LCR.

Figure VI: Consistency reform in the Basel III risk-based capital rules

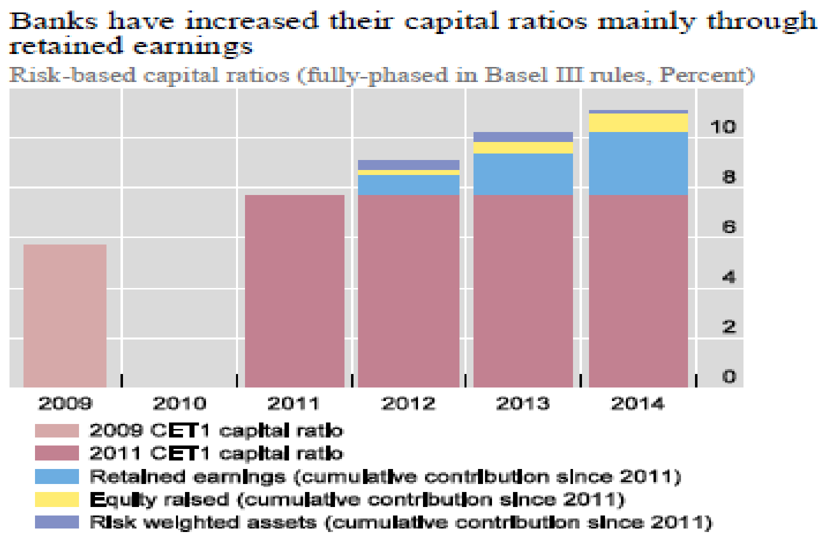


There is an improvement in banks' calculations of risk-weighted assets. The common equity tier 1 (CET1), capital ratio of the BCBS "Group 1" banks,[43] is fully phased as refelected by its decomposition into retained earnings' accumulation, new equity raised, and changes in risk-weighted assets. The figure for 2009 is based on the initial Basel III

[43] The banks that have Tier 1 capital of more than €3 billion and are internationally active.

proposal, and there is no data for 2010. An improvement is noted in capital ratio consistently.

Figure VII: Capital Adequacy Ratio



Source: BCBS Quantitative Impact Study (QIS)[44]

3.2.6. Implementation monitoring forward planner[45]

[44] Ibid. 16.
[45] Ibid. 28.

Reform area	Monitoring body	Monitoring activity	Expected publication date
Building resilient financial institutions	BCBS	• Progress report on timely adoption of Basel III framework	• 2016H1, H2
		• Report to G20 Leaders on Basel III implementation	• 2016Q3
		• RCAP assessments of capital and liquidity standards for Argentina, Indonesia, Korea, Russia and Turkey	• 2016
		• Follow-up assessment reports for Australia, Canada, EU and US	• Mar 2016
		• Follow-up assessment reports for Hong Kong, India, Mexico, Saudi Arabia and South Africa	• Mar 2017
		• RCAP assessments of liquidity standards for Japan, Singapore, EU, US, Switzerland, China, Brazil, Australia, Canada	• 2016-17
	FSB	• Industry workshop on compensation practices	• 2016
		• Fifth progress report on compensation practices	• 2017
Ending too-big-to-fail	FSB	• Resolution progress report to the G20, including results of second Resolvability Assessment Process	• 2016H2
		• Thematic peer review on resolution regimes	• 2016Q1
	BCBS	• Report on implementation of BCBS principles for effective risk data aggregation and risk reporting	• TBD
		• RCAP assessment of the G-SIB framework and review of the D-SIB framework for China, EU, Japan, Switzerland and US	• 2016H2
	IAIS	• Thematic self-assessment and peer review on Insurance Core Principle 12 (winding up and exit from the market)	• 2017H2
Transforming shadow banking into resilient market-based finance	FSB	• Shadow banking progress report	• 2016Q3
		• Thematic peer review on implementation of FSB policy framework for other shadow banking entities	• 2016H1
		• Global shadow banking monitoring report 2016	• 2016Q4
	IOSCO	• *Follow-up peer reviews on implementation of IOSCO recommendations on money market funds and securitisation*	• 2016
Making derivatives markets safer	FSB	• Eleventh progress report on implementing OTC derivatives market reforms	• 2016Q3
		• Report on jurisdictions' planned steps to implement trade reporting peer review recommendations	• 2016Q3
	CPMI-IOSCO	• Implementation monitoring of the Principles for Financial Market Infrastructures – level 1/2/3 assessment reports	• 2016
Other reform areas	FSB	• Country peer reviews of India, Brazil, Japan and France	• 2016
		• *Thematic peer review on macroprudential policy frameworks and tools*	• TBD
		• Progress report in reforming major interest rate benchmarks	• Jul 2016
		• Implementation Monitoring Network (IMN) survey on progress in other reform areas	• 2016Q3
		• *Progress report on implementation of the recommendations in the second phase of the Data Gaps Initiative (with IMF)*	• 2016Q3
	IOSCO	• Thematic review of the implementation of IOSCO's Principles for Financial Benchmarks by the Administrators of Euribor, Libor and Tibor	• 2016
		• Thematic review of WM London 4pm Fix for three currency pairs against the IOSCO Financial Benchmarks Principles	• 2016
		• Thematic review of the implementation of the IOSCO Recommendations regarding the Protection of Client Assets	• 2016
	IAIS	• Thematic self-assessment and peer review on solvency-related Insurance Core Principles	• 2016
		• Thematic self-assessment and peer review on Insurance Core Principle 24 (macroprudential surveillance)	• 2016

3.2.7. Basel Committee jurisdictions

Since the adoption of Basel III standards, the member jurisdictions have been reporting their implementation from 2011. This process has provided transparency on the timeliness of implementation and has complemented the Committee's quantitative impact study (QIS) work on banks' readiness to meet the Basel framework's minimum standards. All the member jurisdictions have issued final rules for the risk-based capital standards. Similarly, all the members have issued final rules for the LCR and the leverage ratio disclosure requirements. There is consistent progress in the implementation of the SIB frameworks.[46]

Table B: Adoption status of Basel III (Number of Basel Committee member jurisdictions[1])

		October 2012	October 2013	October 2014	October 2015
Risk-based capital standard	Final rules in force	0	12	27	27
	Final rules issued (not in force)	7	14	--	--
	Draft rules issued	18	1	--	--
LCR	Final rules in force	--	1	3	25
	Final rules issued (not in force)	--	10	16	--
	Draft rules issued	--	4	7	2
Leverage ratio disclosure standard	Final rules in force	--	--	4	22
	Final rules issued (not in force)	--	--	11	1
	Draft rules issued	--	--	8	3
G-SIB framework[2]	Final rules in force	--	--	--	8
	Final rules issued (not in force)	--	--	--	12
	Draft rules issued	--	--	--	1
D-SIB framework[2]	Final rules in force	--	--	--	2
	Final rules issued (not in force)	--	--	--	13
	Draft rules issued	--	--	--	5

[1] In this table, the nine member jurisdictions that are also Member States of the European Union are counted as separate jurisdictions.
[2] Implementation of G-SIB and D-SIB frameworks was not reported separately in 2013 and 2014.

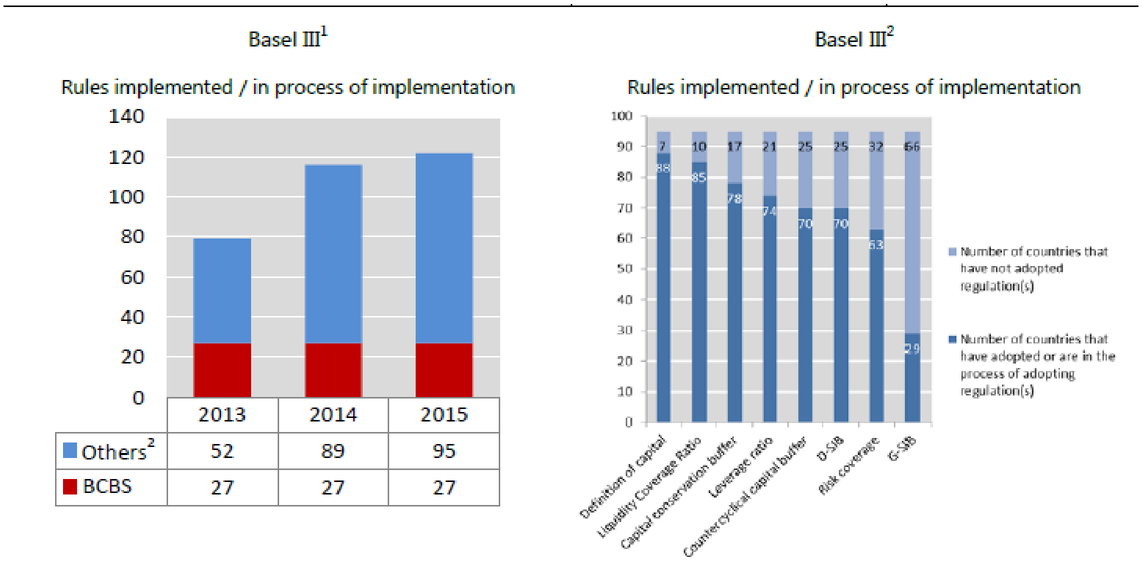
Source: Basel Committee on Banking Supervision, *Ninth progress report on adoption of the Basel regulatory framework*, October 2015, available at www.bis.org/bcbs/publ/d338.htm.

[46] BCBS, 'Implementation of Basel standards: A report to G20 Leaders on implementation of the Basel III regulatory reforms' (November 2015) , 7 <http://www.bis.org/bcbs/publ/d345.pdf> accessed 16-Feb-16.

3.2.8. Non-Basel Committee jurisdictions[47]

A large number of non-Basel Committee member jurisdictions have adopted or are in the process of adopting the Basel III standards. In July 2015, the Financial Stability Institute (FSI) updated its annual progress report on the implementation of the Basel framework in jurisdictions that are neither members of the Basel Committee nor members of the European Union. The report provides information on 98 non-Basel Committee jurisdictions as of end-June 2015. The graphs below reflect the latest FSI survey results from the above 98 jurisdictions as well as an additional 19 non-Basel Committee European Union jurisdictions. This analysis shows that 95 non-Basel Committee jurisdictions have adopted or are in the process of adopting Basel III. A more granular assessment of the Basel III implementation process in these jurisdictions shows that most of them are prioritizing core aspects of the post-crisis global regulatory framework, such as the enhancement to the definition of regulatory capital and the new global standards on liquidity.

Figure VIII: Basel III Implementation in non-Basel Committee Jurisdictions



[1] A jurisdiction that has implemented at least one subsection of Basel III is deemed to be in the process of implementation.
[2] Including non-Basel Committee EU jurisdictions.
Sources: Basel Committee on Banking Supervision; Financial Stability Institute.

[47] Ibid.

3.2.9. Consistency of reforms

The Basel Committee has published assessment reports on the consistency of the final risk-based capital rules issued by 22 of its members.

Table C: Overview of jurisdictional assessments[48]

Status	Jurisdiction	Publication date of assessment	Number of regulatory changes made or committed to be made	Overall assessment grade
Completed assessments	Japan	Oct 2012	5	Compliant
	Singapore	Mar 2013	15	Compliant
	Switzerland	Jun 2013	22	Compliant
	China	Sep 2013	90	Compliant
	Brazil	Dec 2013	42	Compliant
	Australia	Mar 2014	14	Compliant
	Canada	Jun 2014	54	Compliant
	European Union	Dec 2014	0	Materially non-compliant
	United States	Dec 2014	3	Largely compliant
	Hong Kong SAR	Mar 2015	17	Compliant
	Mexico	Mar 2015	55	Compliant
	India	Jun 2015	44	Compliant
	South Africa	Jun 2015	39	Compliant
	Saudi Arabia	Sep 2015	93	Compliant

The Committee is now also assessing its members' implementation of the LCR standard. The assessments of five jurisdictions have been published so far during 2015. The Committee plans to evaluate the remaining jurisdictions during 2016 and 2017, alongside reviews of the risk-based capital standard, where possible.[49]

[48] Ibid. 7.
[49] Ibid. 8.

Table D: Outline of jurisdictional assessment of LCR implementation

Status	Jurisdiction	Publication date of assessment	Number of regulatory changes made or committed to be made	Overall assessment grade
Completed assessments	Hong Kong SAR	Mar 2015	0	Compliant
	Mexico	Mar 2015	9	Compliant
	India	Jun 2015	21	Largely compliant
	South Africa	Jun 2015	2	Compliant
	Saudi Arabia	Sep 2015	12	Largely compliant

4. Summary

The GFRS focuses on stability and sustainability of the individual financial sector and the global financial system as a whole. However, the operation of micro and macro-prudential regulation is a huge task because the tools employed by GFRS varies, based on cyclical shocks and its impact on the world economy also varies based on spillover effects. It is hard to reach consensus on these questions because measures that work in one jurisdiction may not be suitable in another jurisdiction. Therefore, the complex queries in GFRS, will be addressed, based on trial and error method, till it finalizes, based on concrete evidence and facts.

The Micro-Prudential Regulation faces regulatory gaps to address the concern of unstable and volatile capital flows. However, capital account buffer (international reserve) is not the solution to the issue of stability in capital flow. In fact, the Micro Prudential Regulations and Macro-Prudential Regulations have pursued the mandate of promoting and incentivizing capital flow. This was one of the reason for the increase GFI in GFRS.

There is consensus within in member jurisdiction, to implement minimum level of rules and regulations. However, most of the agreements are soft law in nature. Therefore, it faces issues of weak compliance. The standards and principles in place suffer from associated operational limitation of weak compliance. The compliance mechanism needs to shift from consensus-based model to rigorous compliance, as reflected by hard international law. Incentives for implementation also need to be put in place. Since, each state differs according to their size, economic features, and priorities, it is hard to impose a straight-jacket formula, without considering cross-country requirements.

The IMF and FSB are distinct organizations. However, their goals tend to overlap with regards to their objective and mandate as a Macro-Prudential Regulator. There is a possibility that more collaboration between the two institutions will create the problem of shifting accountability towards one another. Nevertheless, in the backdrop of GFI, both institutions have been challenged on the question of financial stability and sustainability. The FSB and IMF partnership on developing an early-warning system to prevent a repeat error in the global financial system is a good initiative. However, their coordination work remains much on paper. The nature of this task requires both to work together, but their different locations, size, and organizational cultures, along with a cooperative framework, is missing. The evolved form of the two institutions, is still at a preliminary stage and need to experience the litmus test of financial crisis in ordered to gauge their efficacy.

The FSB's Charter is not intended to create any legal rights and obligations. The FSB lack also institutionalization capacity, given the very few number of staff currently employed. This raises the question of the proportion of the task assigned, and resources provided. In fact, FSB cannot be compared with IMF, World Bank, EU, OECD, and WTO, which employ a staff of a few hundred or thousand.

The IMF undertake surveillance to monitor compliance of member states. The member jurisdiction can obtain credit from IMF on grounds of conditionality clause, encompassing the Structural Adjustment Programme (SAP). The SAP has been challenged on various occasions. The conditionality clause is arbitrary and discriminatory in favour of Advanced Countries and against the Least Developed Countries. The parameter of clause varies from country to country. For better uniformity, the target should be given based on overall capacity of countries. They should be nurtured to noncompliance jurisdictions, if they face genuine difficulty in complying with international standards. This approach will enhance the presence of IMF and increase universal membership worldwide.

The notion of a Supra global financial regulator replacing the international soft law regime, along the lines of EU regulation, looks impossible in the existing framework. However, the supra regulator can substantially influence sovereign supervision and regulatory decision in multi-jurisdiction, where membership is universal, across the globe regardless of size, and economic contribution. The supra global financial regulatory body, variously named by number of renowned economists, as World Financial Organization (WFO) or World Financial Authority (WFA). The idea of World Financial Organization (WFO) looks far-fetched given the existing reality, though, the actions of FSB are shaping it on the lines of a global financial regulator or International Macro-Prudential Regulator.

The governance structure of FSB has been streamlined on the strength of their sound permanent institutional footing and funding. The FSB is a treaty-based inter-governmental organization. For evolving into a legal personality, the member nations have formed an association under Swiss law and have also developed appropriate Articles of Association for governance purpose. It has adopted Rules of Procedure to improve its internal governance and transparency and to bring about an element of standardization in its internal processes. The FSB should gradually obtain immunities by operating as an association under the BIS Headquarters Agreement. The question whether to entitle FSB to specific immunities and privileges, will be decided based on the contribution of FSB by the end of 2016.

Progressive data is available on the implementation of agreed reforms as reported to G20 Leaders in Brisbane Summit (The Ninth G20 Summit, 2014). The implementation of the guidelines for trade reporting, central clearing, trading framework, and margin requirement in OTC derivative markets are estimable. All the FSB jurisdictions, excluding three, have implemented trade reporting guidelines. Over 90% of market i.e., 12 jurisdictions have implemented central clearing system. Eight jurisdictions have a mechanism of exchange or standardized platform for derivatives trades. Most of the jurisdiction are in the primitive stage to implement margin requirement and will gradually implement margin requirement by 2019.

The enactment of Basel III has largely been judicious. All 24 FSB jurisdictions have Basel III risk-based capital rules in force. The Liquidity Coverage Ratio (LCR) guidelines have been implemented in 22 jurisdictions i.e., 98% of the market. The guideline for higher loss absorbency requirements for G-SIBs has been issued in 9 of the 10 FSB jurisdictions that have G-SIBs headquartered in them. Further, the guidelines on the assessment methodology and higher loss absorbency requirements for D-SIBs, have been placed in 14 jurisdictions (45% of the market). There is an improvement in banks' calculation of risk-weighted assets consistently. A large number of non-Basel Committee member jurisdictions have adopted the Basel III standards. In July 2015, the Financial Stability Institute (FSI) updated its annual progress report and provided information on 95 non-Basel Committee jurisdictions that have adopted or are in the process of adopting Basel III.

The Brisbane Summit (2014) and Antalya Summit (2015), took the crucial policy decision of ending the *too-big-to-fail* situation. A framework for a common international norm on the Total Loss-Absorbing Capacity (TLAC) of Globally Systemically Important Banks (G-SIB) was developed. Steps were taken to prevent cross-border derivative contracts to avoid disruption in globally systemic banks. The success of ending the *too big to fail* dilemma may never be absolute because all financial institutions cannot be insulated fully from all external shocks. However, these proposals will help change the system so that individual banks, as well as their investors and creditors, bear the costs of their own actions and the consequences of the risks they take.

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8 . Data Analysis and Data Interpretation: Quantifiable similarities of Economic Crisis

SCHEME OF THE CHAPTER

1. Hypotheisis
2. Cases
3. Regions
4. Time Intervals
5. Variables
6. Data Analysis and Data Interpretation : Quantifiable similiarties of distinct economic pattern leading to economic crisis

6.1. GDP growth (annual %)

6.2. Exports of goods and services (annual % growth)

6.3. Imports of goods and services (annual % growth)

6.4. Inflation, consumer prices (annual %)

6.5. Portfolio equity, net inflows (BoP, current US$)

6.6. Unemployment, total (% of total labor force)

6.7. Foreign direct investment, net inflows (BoP, current US$)

6.8. Final consumption expenditure, etc. (annual % growth)

6.9. Trade (% of GDP)

6.10. Stock market capitalization to GDP (%)

6.11. Stock price volatility

6.12. Current account balance (current US$)

6.13. Merchandise exports (current US$)

6.14. Merchandise imports (current US$)

7. Inference

Annexure : 8.1

1. Hypotheisis :

There is a distinct economic pattern that eventually leads to an economic crisis, having quantifiable similarities.

2. Cases:

Asian Financial Crises - AFC (1997-1998)
Global Financial Crisis – GFC (2007-10),
Eurozone Crises – EC (2008-10)

Note: Euro crises merged with Global Financial Crisis

3. Regions:

Central Europe and the Baltics
Europe & Central Asia (developing only)
East Asia & Pacific (developing only)
Latin America & Caribbean (developing only)
Sub-Saharan Africa (developing only)
North America
Middle East & North Africa (developing only)
South Asia
World
Caribbean small states
Euro area
Arab World

4. Time Intervals:

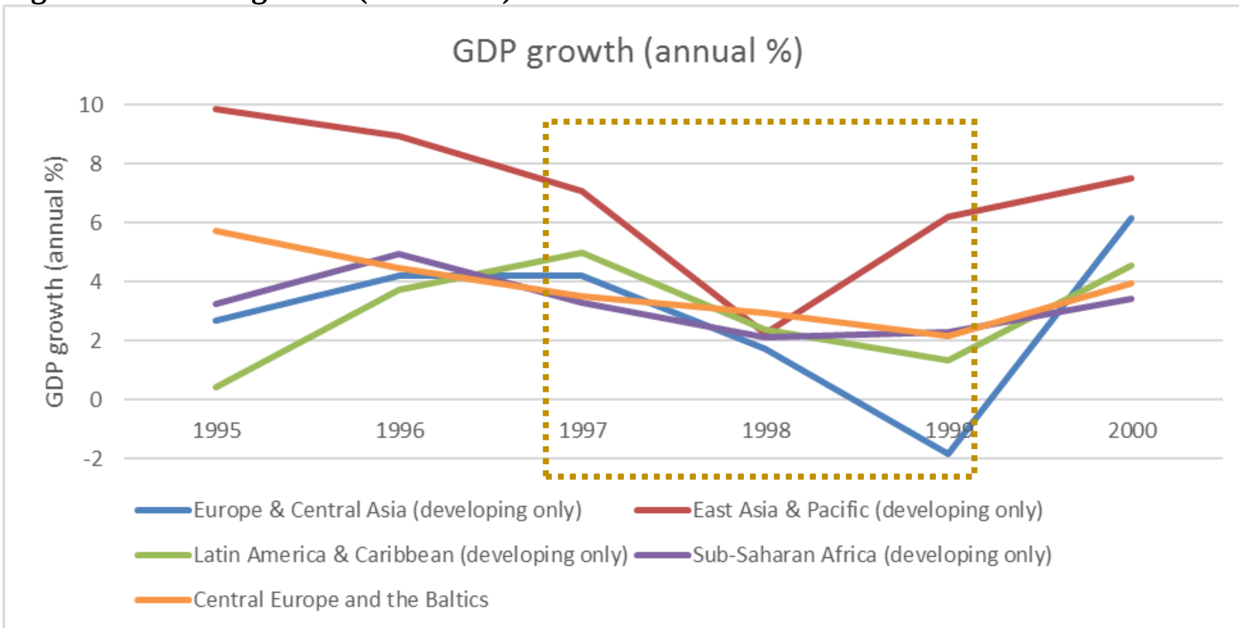
1. T-2 ,T, and T+2 : 1995 to 2000 (AFC)
2. T-3, T and T+3: 2004 to 2011 (GFC and EC)

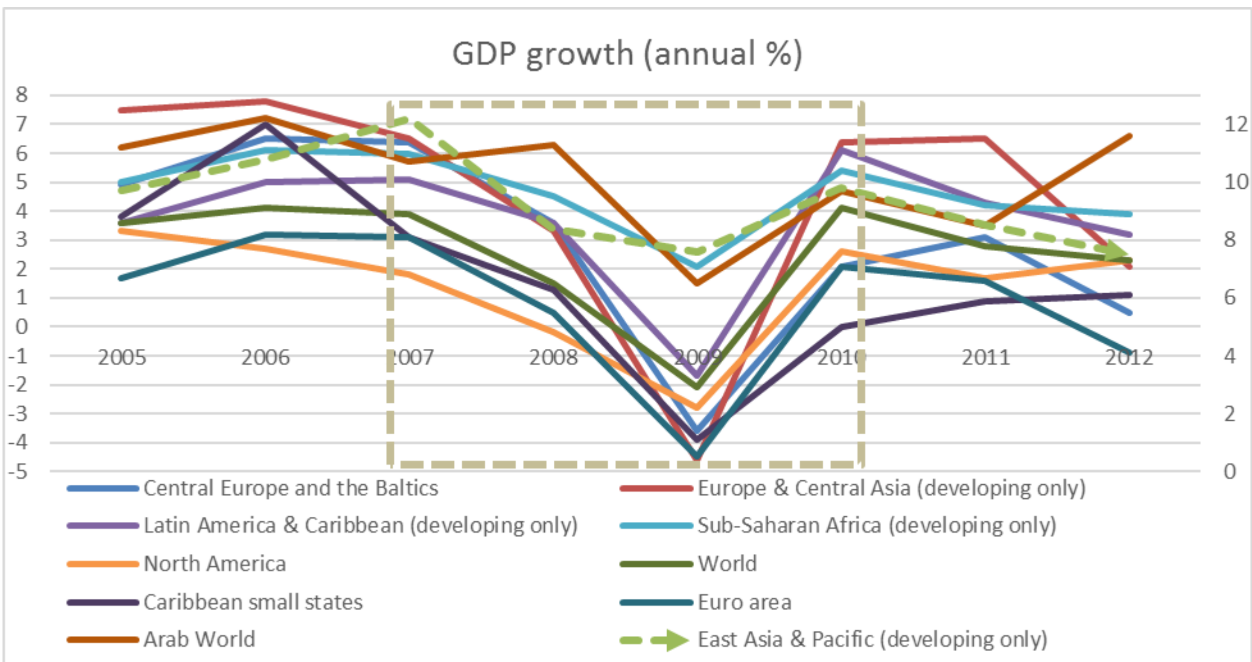
5. Variables:

1. GDP growth (annual %)
2. Exports of goods and services (annual % growth)
3. Imports of goods and services (annual % growth)
4. Inflation, consumer prices (annual %)
5. Portfolio equity, net inflows (BoP, current US$)
6. Unemployment, total (% of total labor force)
7. Foreign direct investment, net inflows (BoP, current US$)
8. Final consumption expenditure, etc. (annual % growth)
9. Trade (% of GDP)
10. Stock market capitalization to GDP (%)
11. Stock price volatility
12. Current account balance (current US$)
13. Merchandise exports (current US$)
14. Merchandise imports (current US$)

6. Data Analysis and Data Interpretation : Quantifiable similiarties of distinct economic pattern leading to economic crisis

Figure : 6.1. GDP growth (annual %)[1]

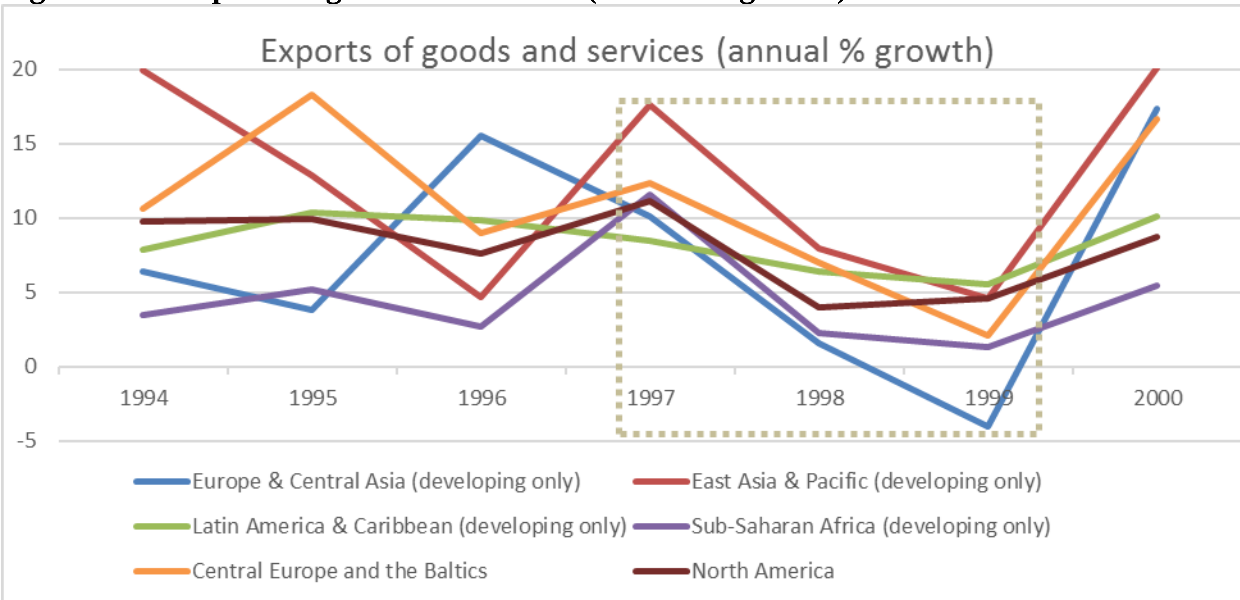


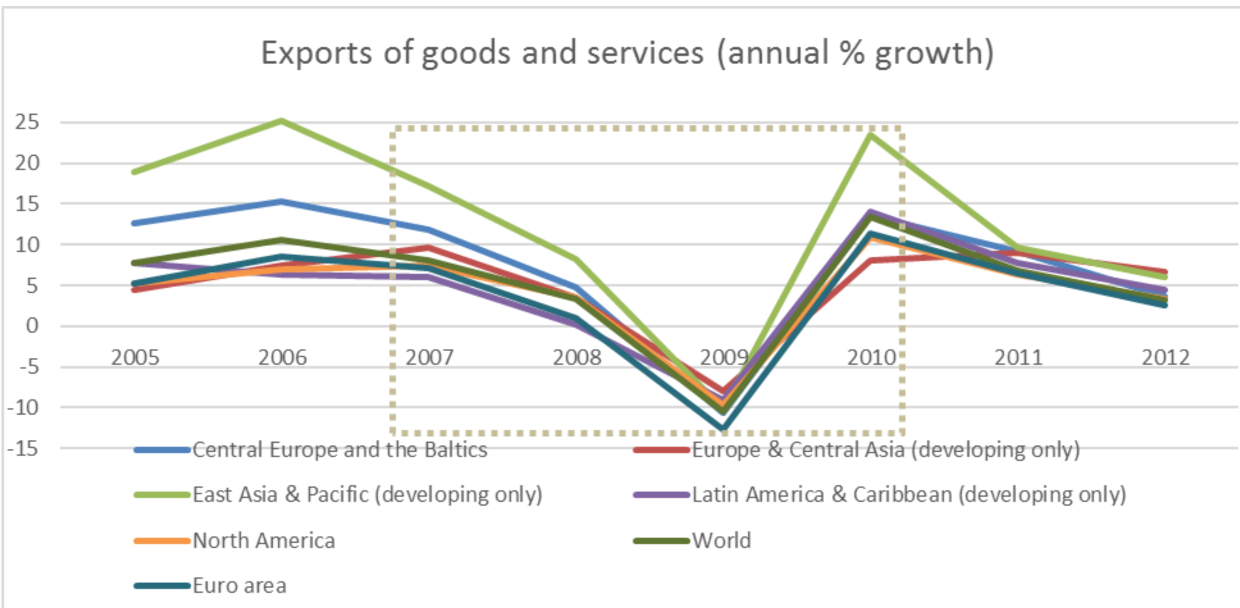


Source: World Bank national accounts data, and OECD National Accounts data files (Researcher Work).

[1] Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Figure : 6.2. Exports of goods and services (annual % growth)[2]

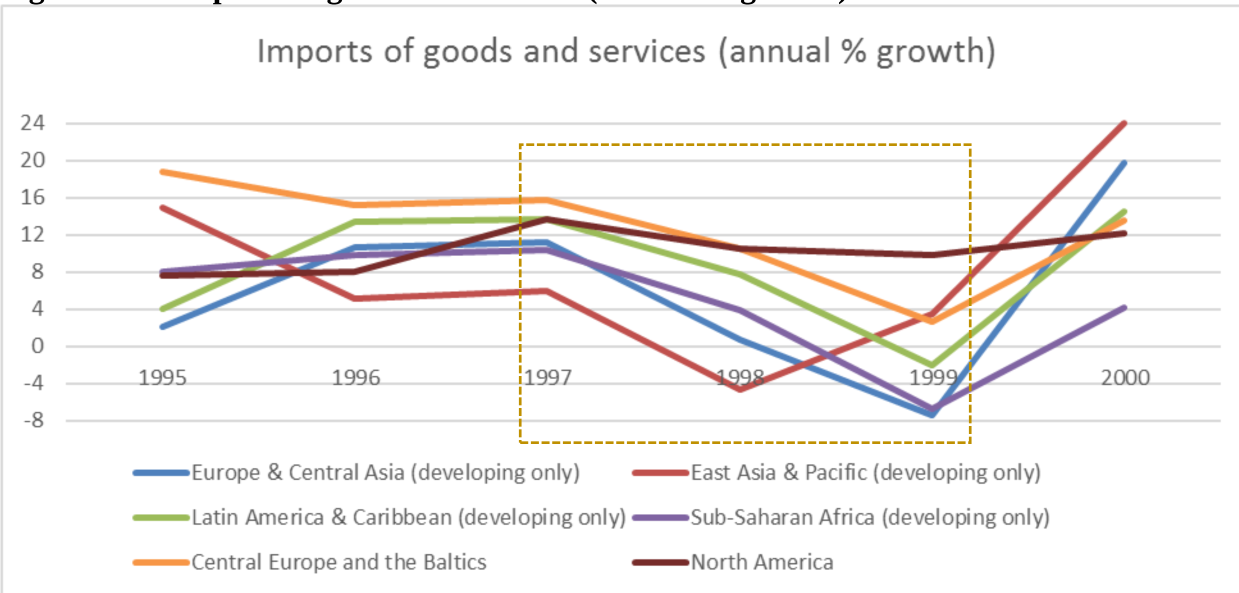


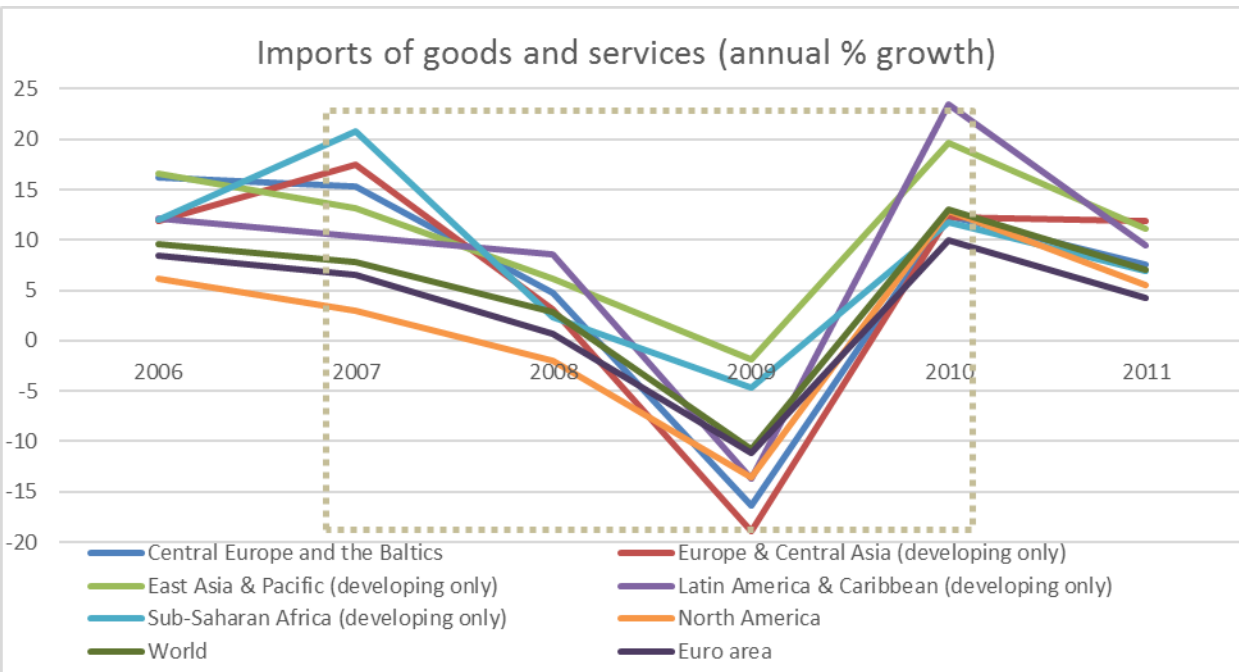


Source: World Bank national accounts data, and OECD National Accounts data files (Researcher Work).

[2] Annual growth rate of exports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Figure : 6.3. Imports of goods and services (annual % growth)[3]

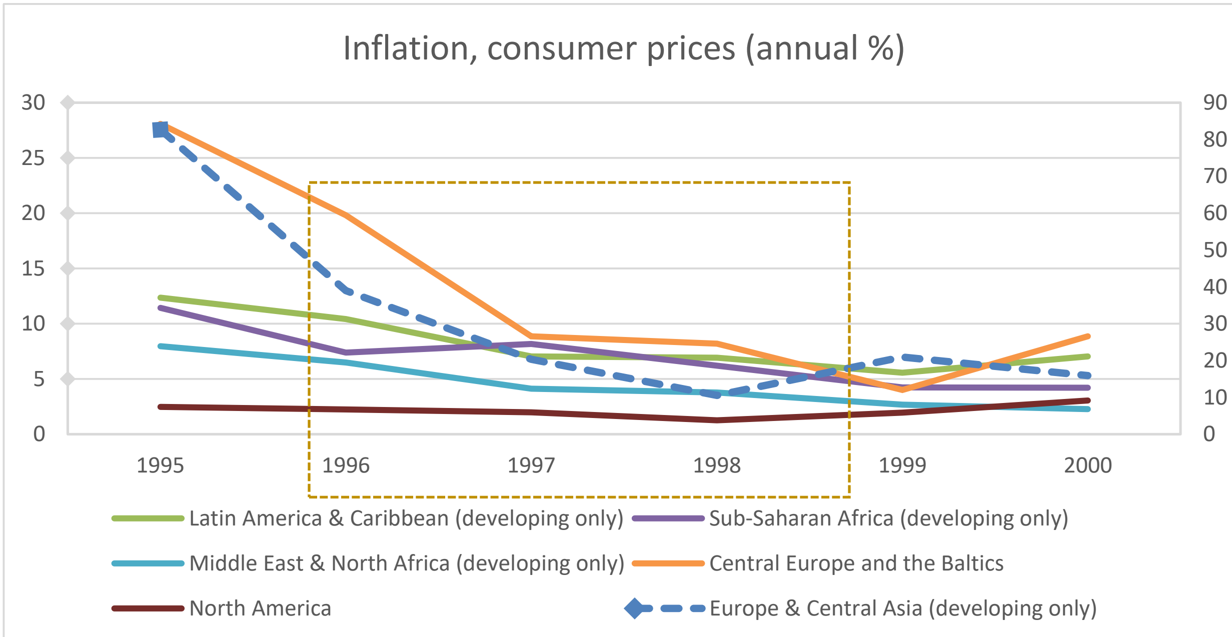


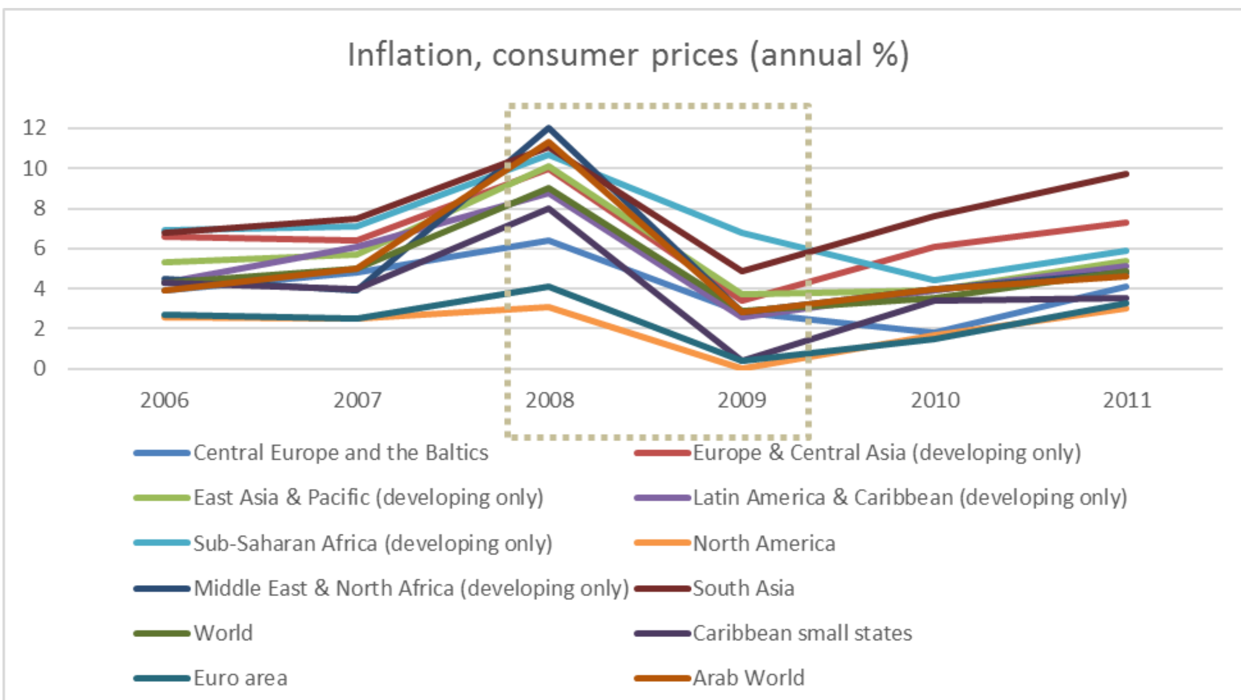


Source: World Bank national accounts data, and OECD National Accounts data files (Researcher Work).

[3] Annual growth rate of imports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Figure : 6.4. Inflation, consumer prices (annual %)[4]

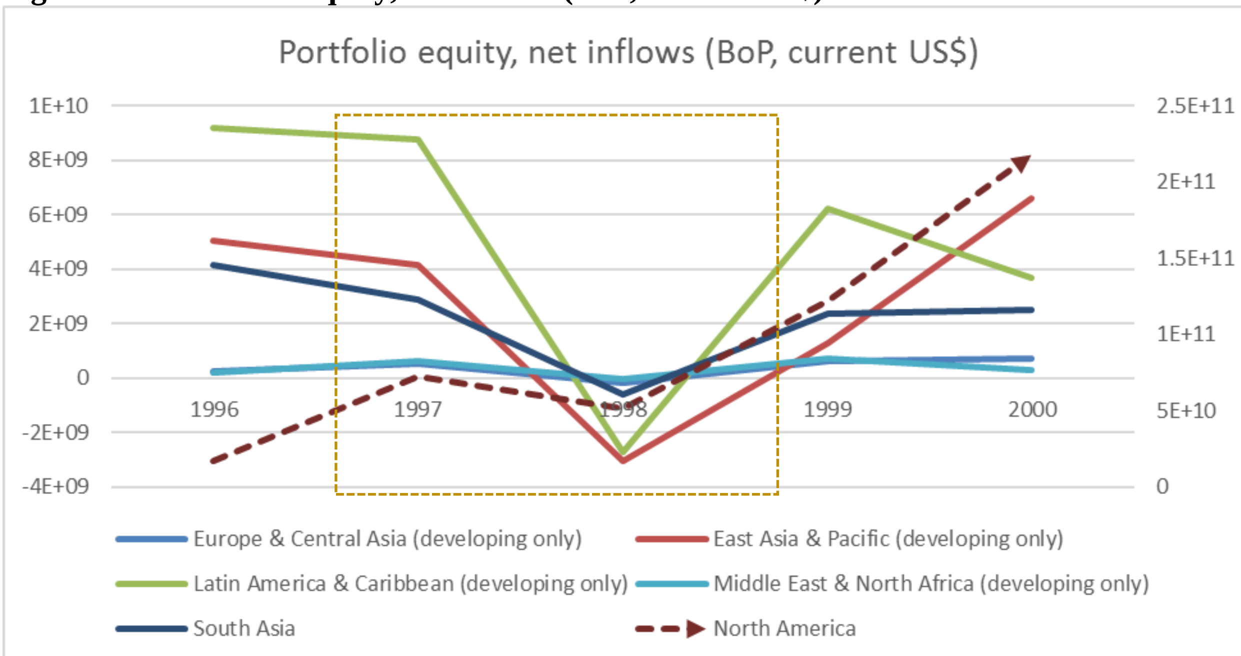


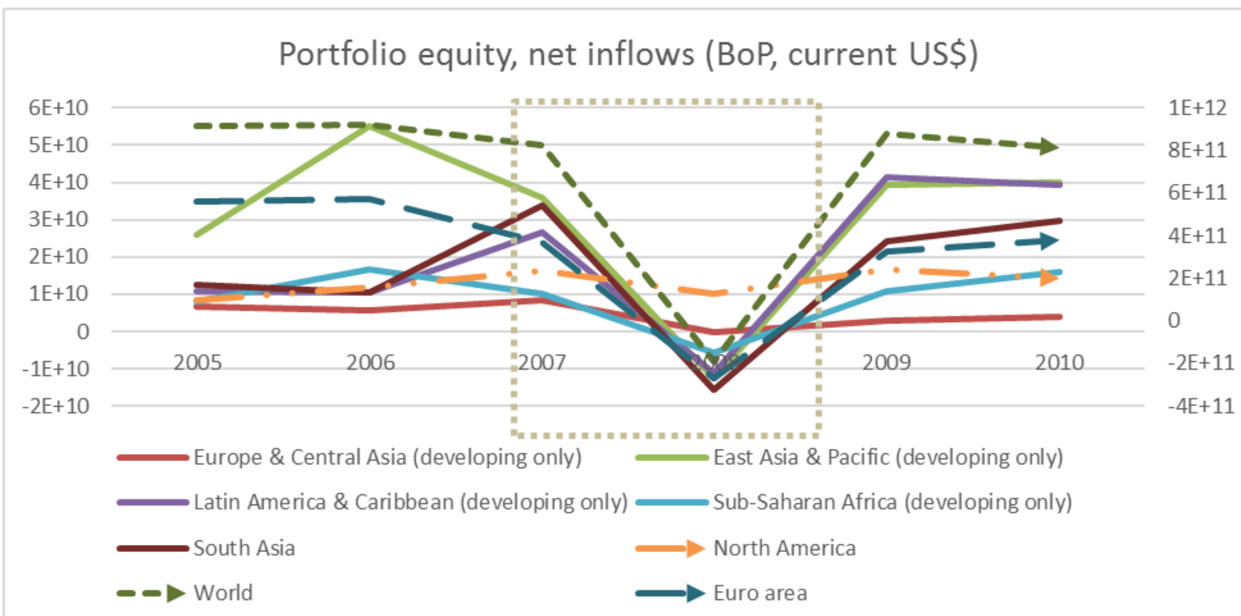


Source: International Monetary Fund, International Financial Statistics and data files (Researcher Work).

[4] Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

Figure : 6.5. Portfolio equity, net inflows (BoP, current US$)[5]

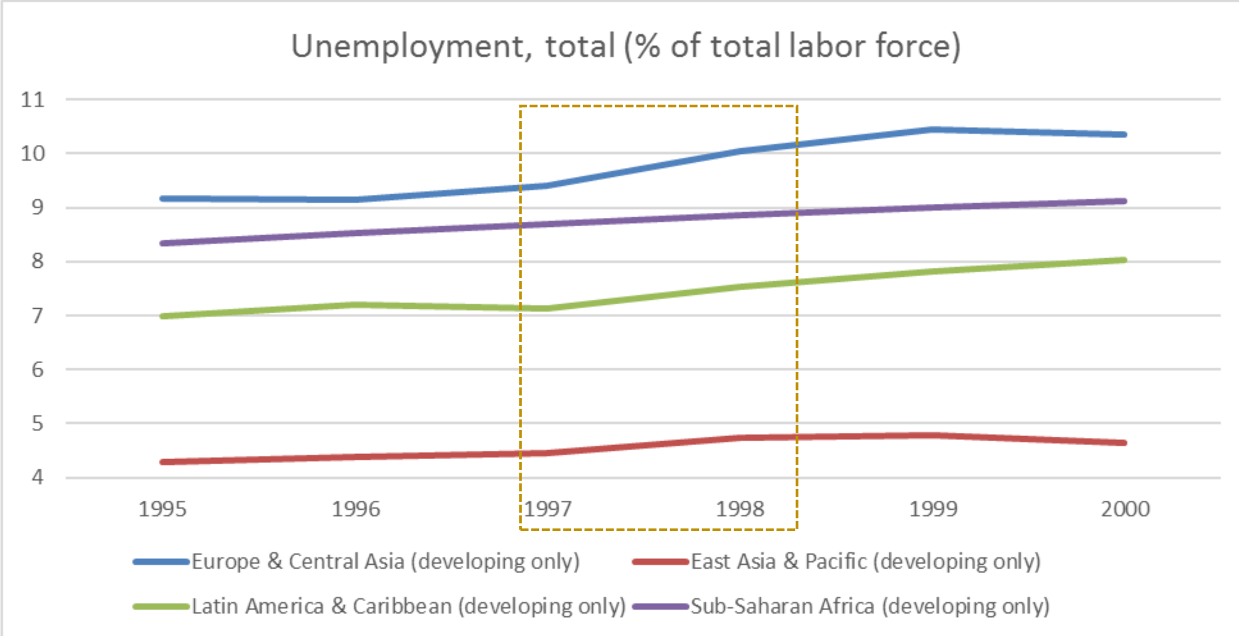


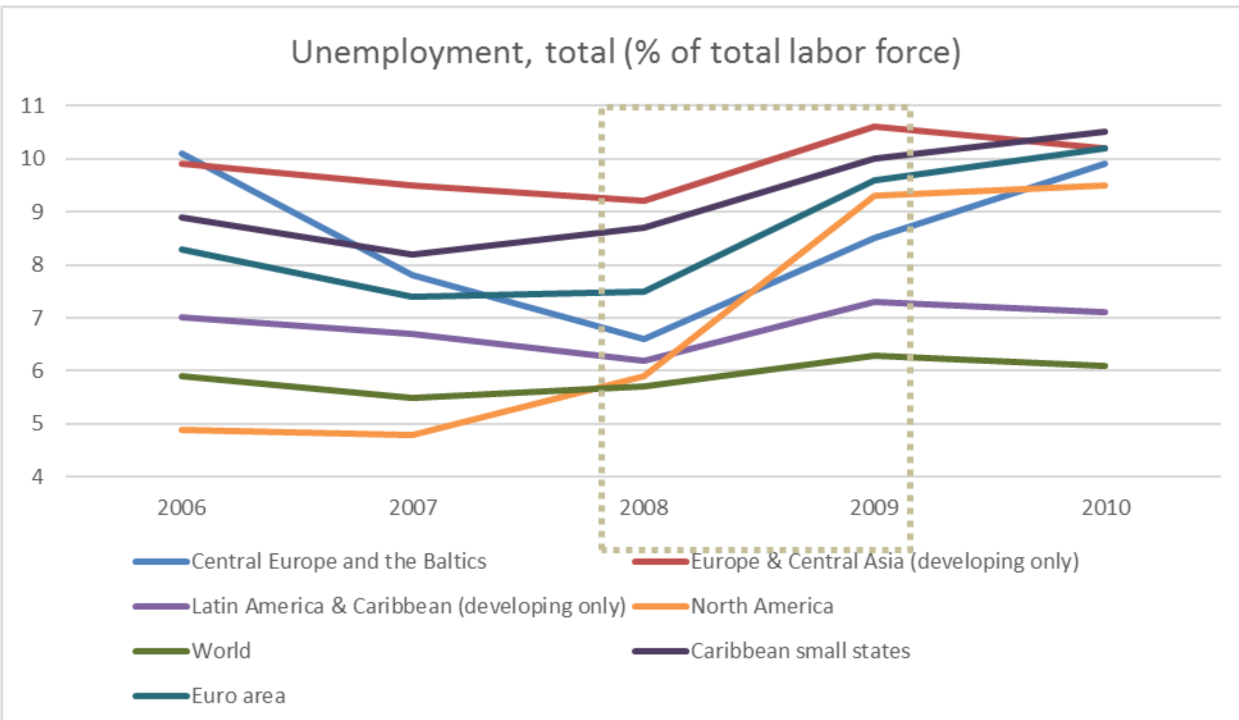


Source: International Monetary Fund, Balance of Payments database, and World Bank, International Debt Statistics (Researcher Work).

[5] Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.

Figure : 6.6. Unemployment, total (% of total labor force)[6]

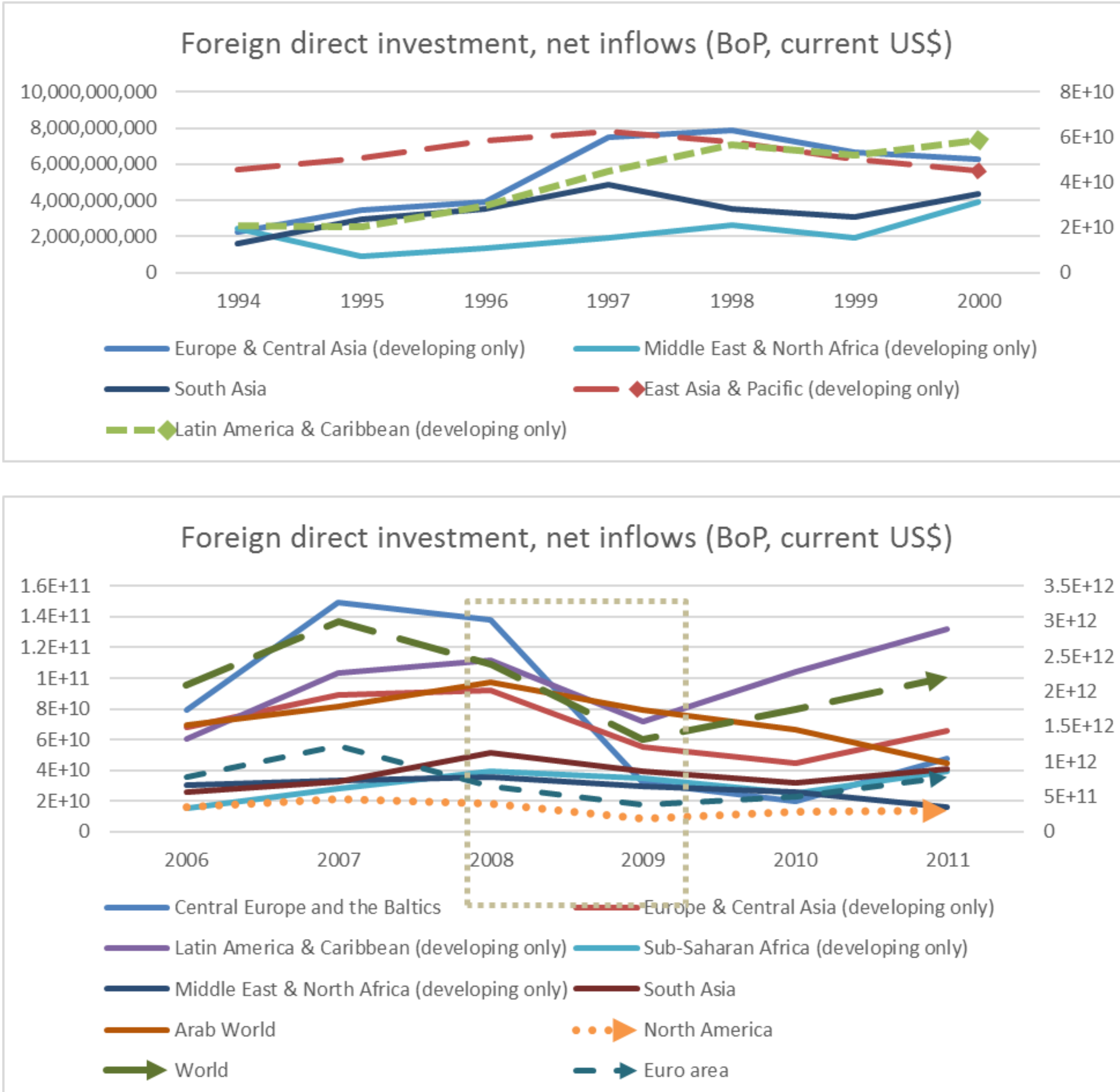




Source: International Labour Organization, Key Indicators of the Labour Market database (Researcher Work).

[6] Unemployment refers to the share of the labor force that is without work but available for and seeking employment.

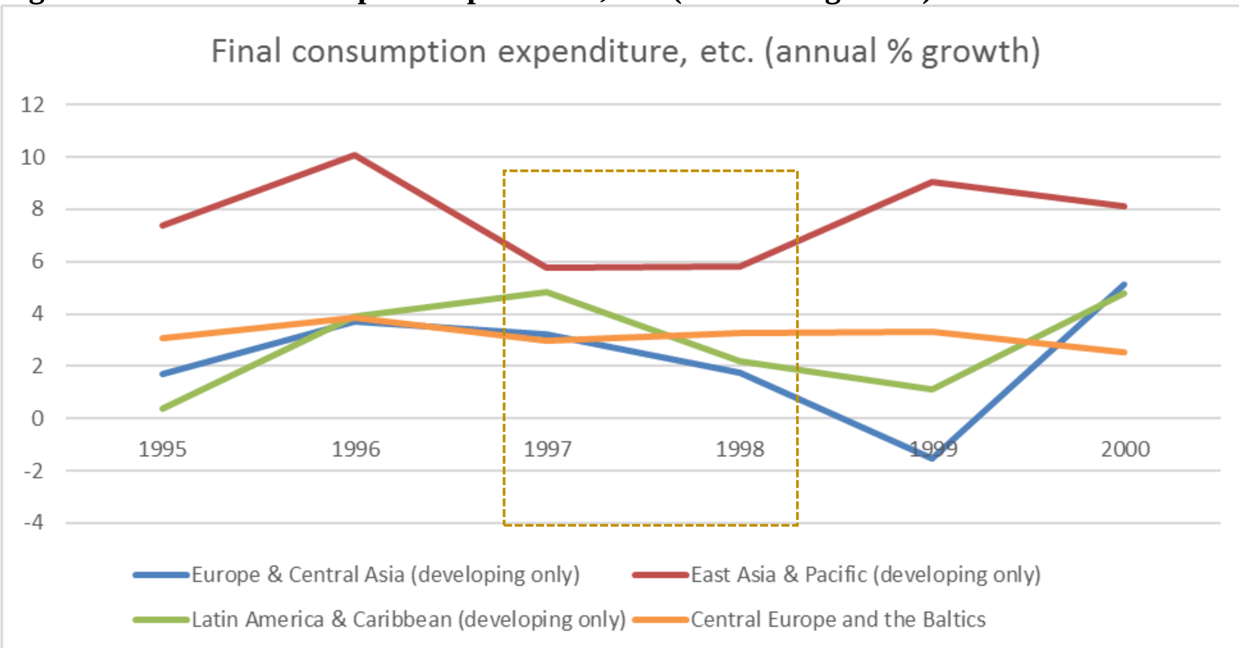
Figure : 6.7. Foreign direct investment, net inflows (BoP, current US$)[7]

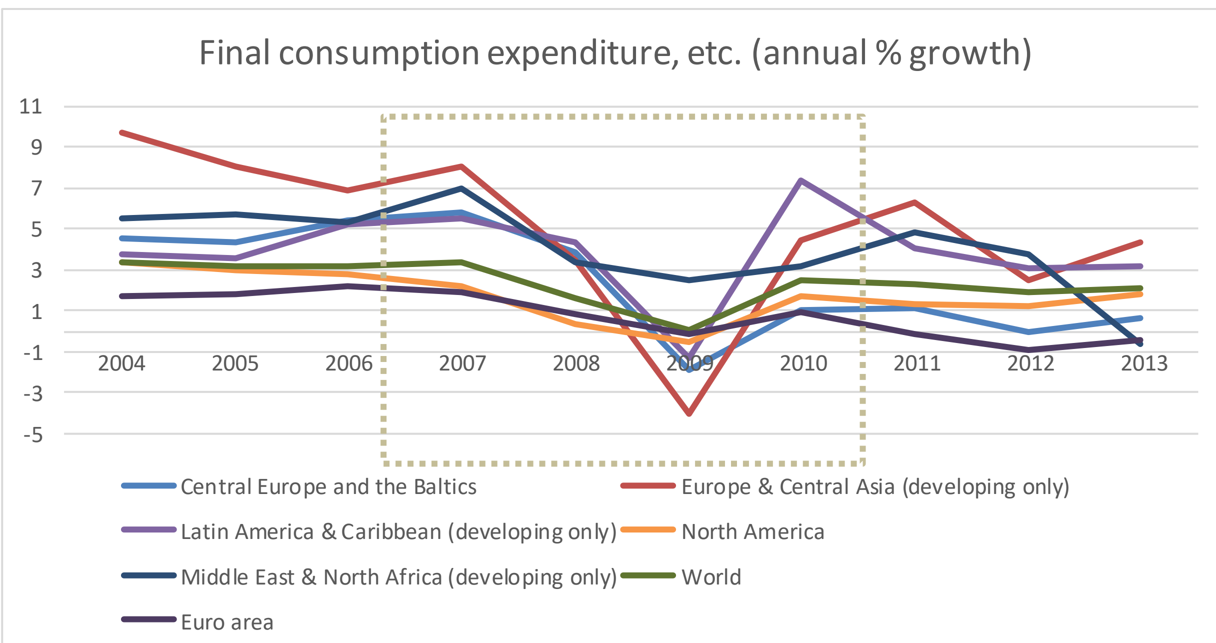


Source: International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.

[7] Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. Data are in current U.S. dollars.

Figure : 6.8. Final consumption expenditure, etc. (annual % growth)[8]

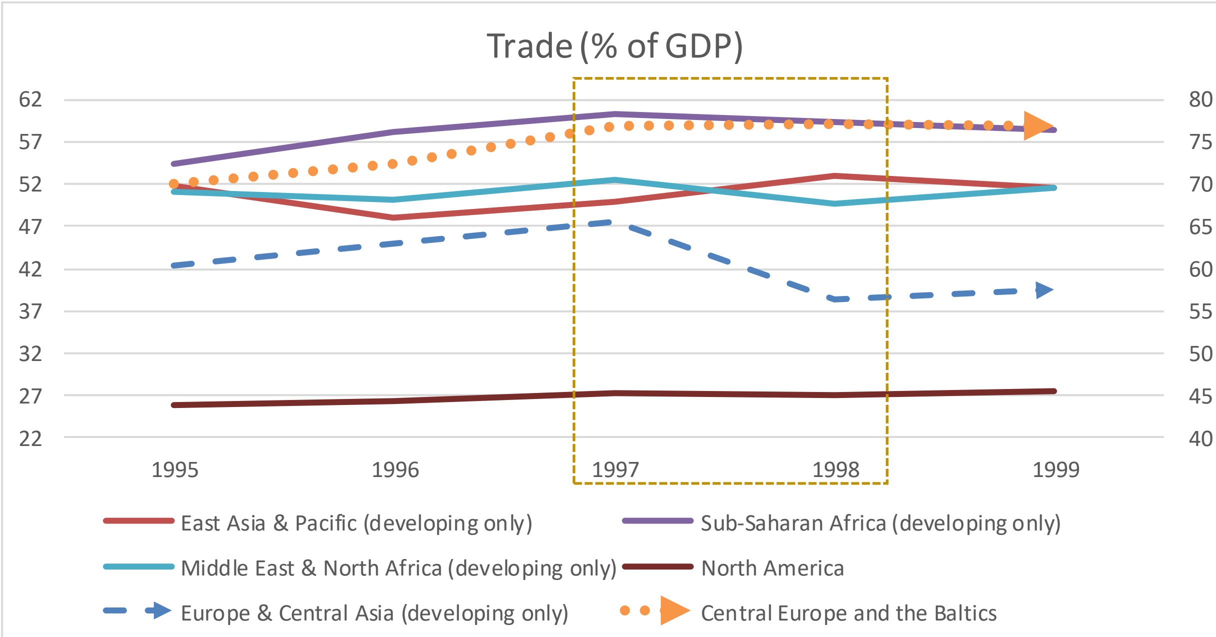


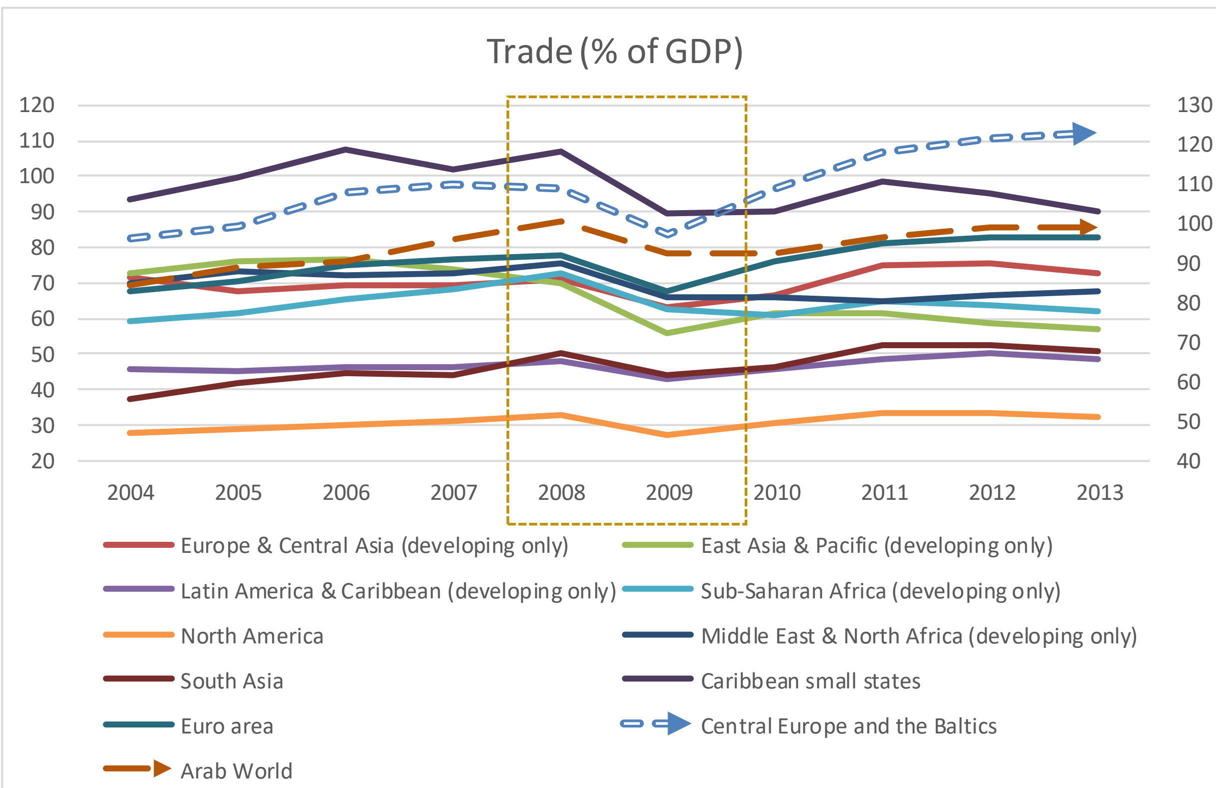


Source: World Bank national accounts data, and OECD National Accounts data files (Researcher Work).

[8] Average annual growth of final consumption expenditure based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

Figure : 6.9. Trade (% of GDP)[9]

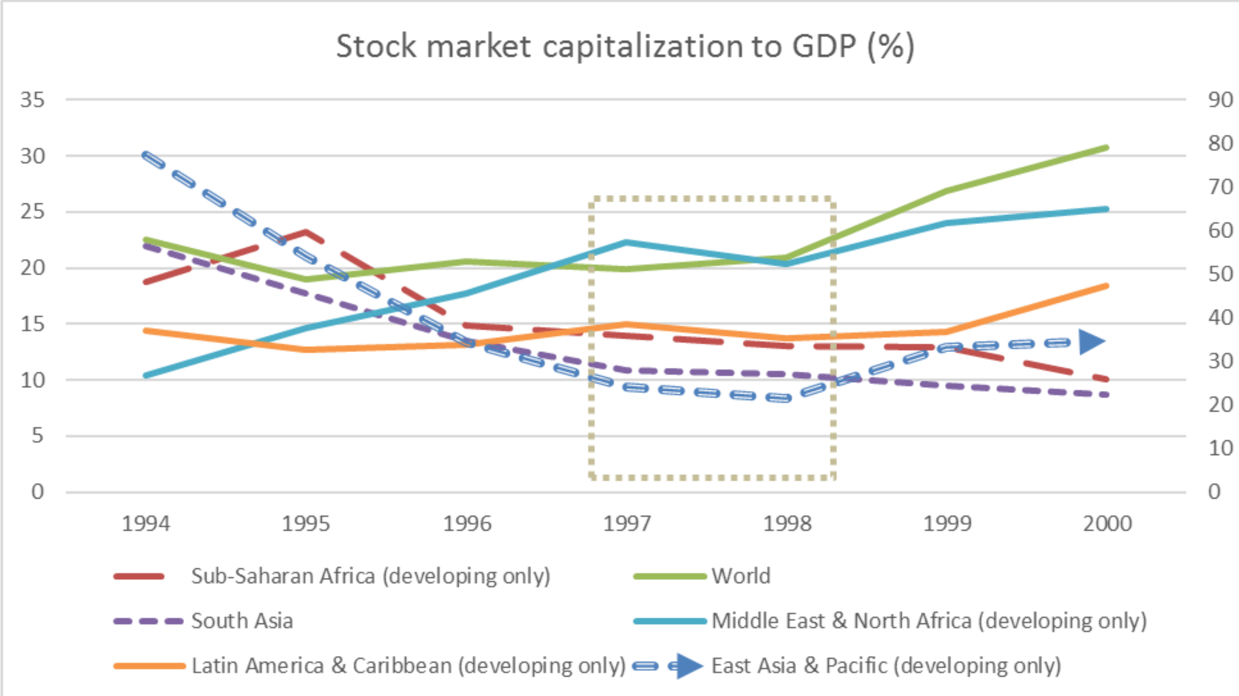


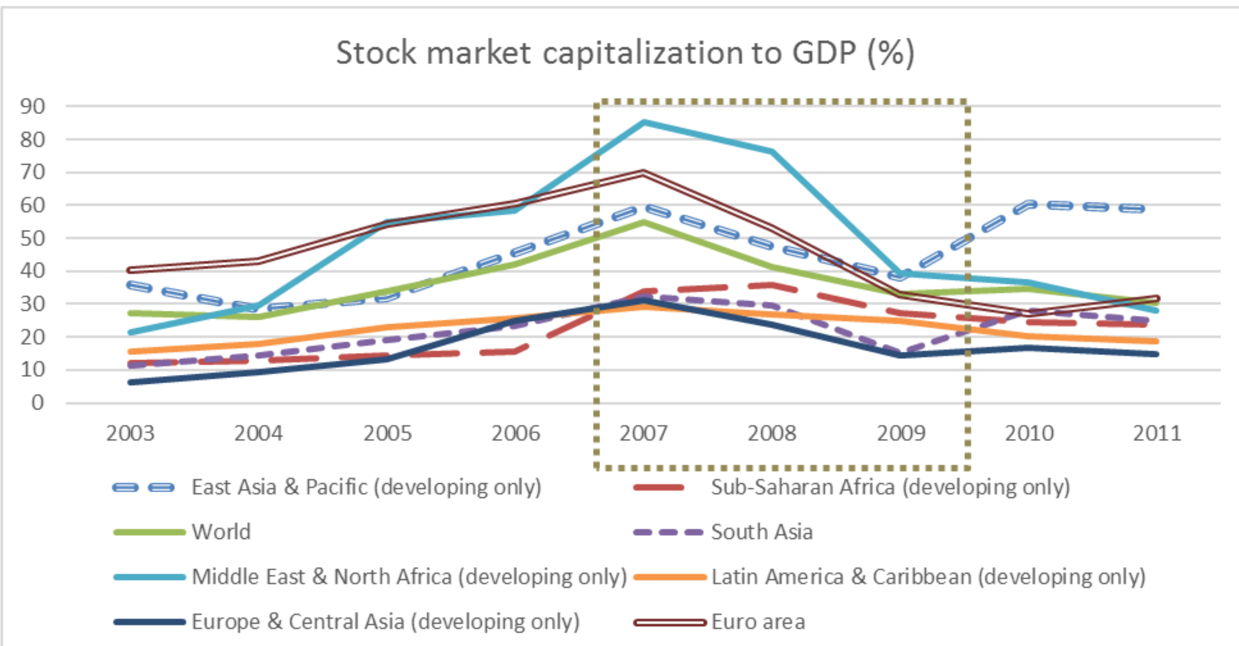


Source: World Bank national accounts data, and OECD National Accounts data files (Researcher Work).

[9] Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.

Figure : 6.10. Stock market capitalization to GDP (%)[10]





Source: Global Stock Markets Factbook and supplemental S&P data, Standard & Poor's

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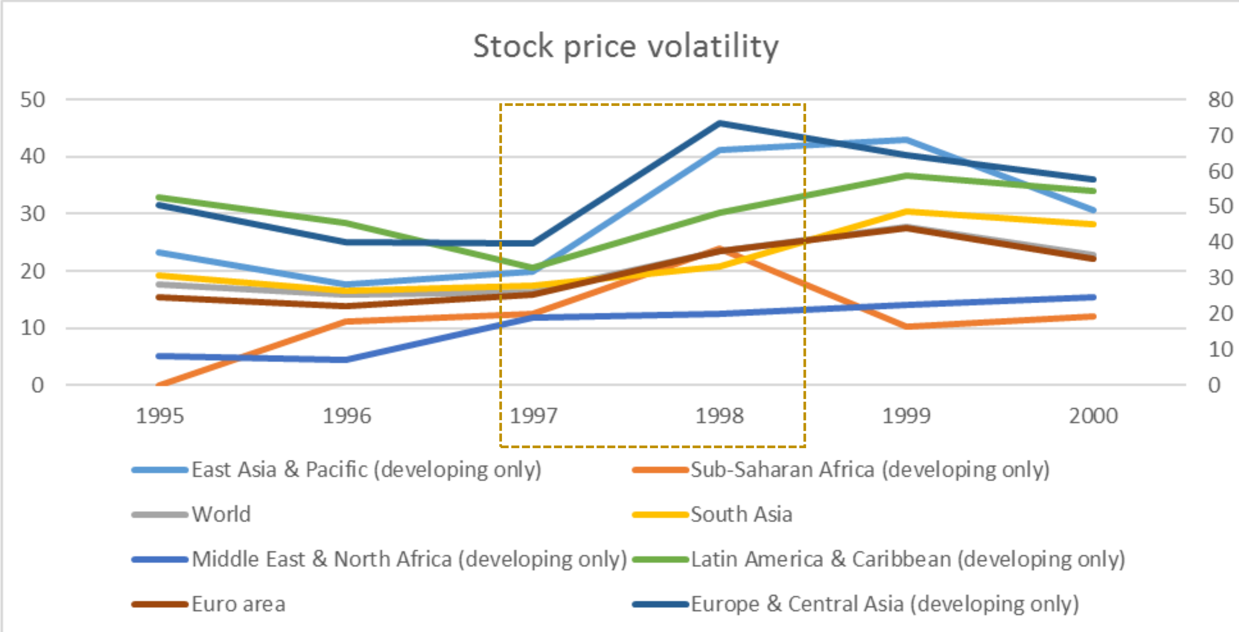
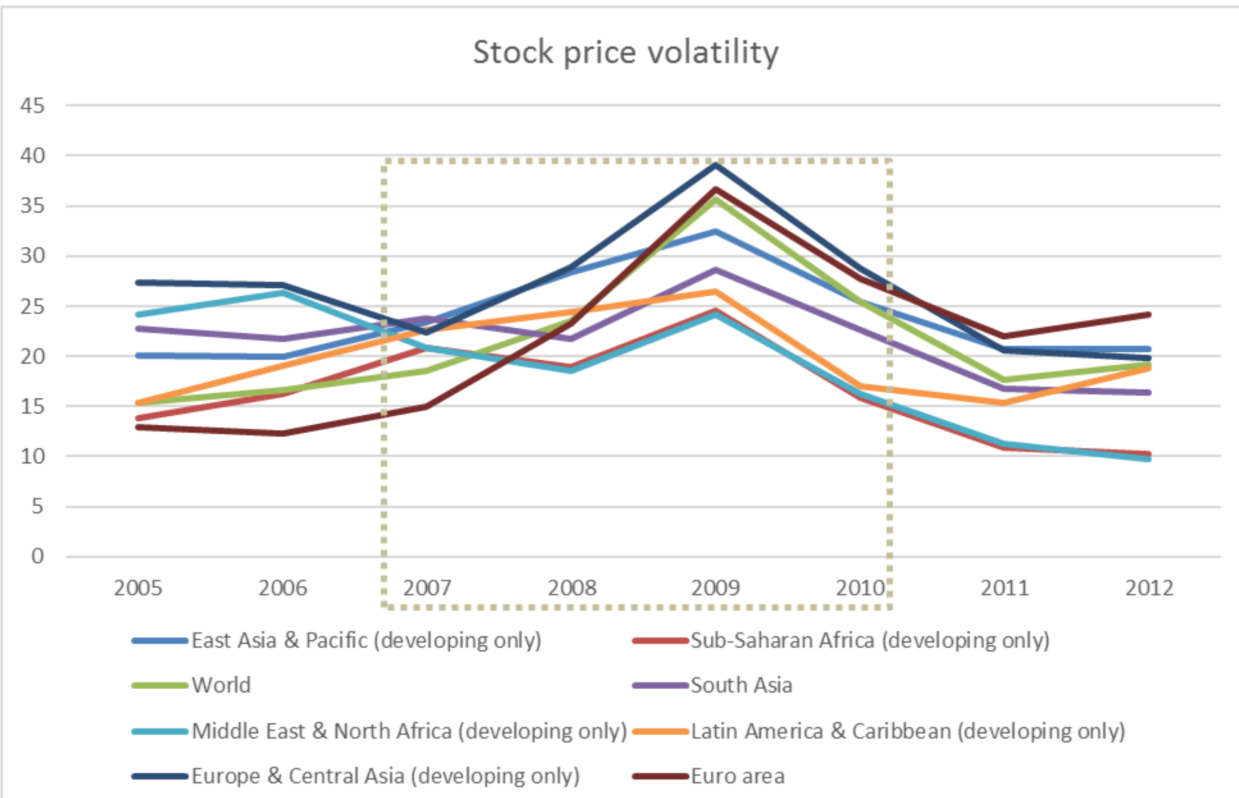
[10] Value of listed shares to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is stock market capitalization, P_e is end-of period CPI, and P_a is average annual CPI. End-of period CPI (IFS line PCPI) and average annual CPI is calculated using the monthly CPI values (IFS line PCPI).

Figure : 6.11. Stock price volatility[11]





Source: Bloomberg (Researcher Work)

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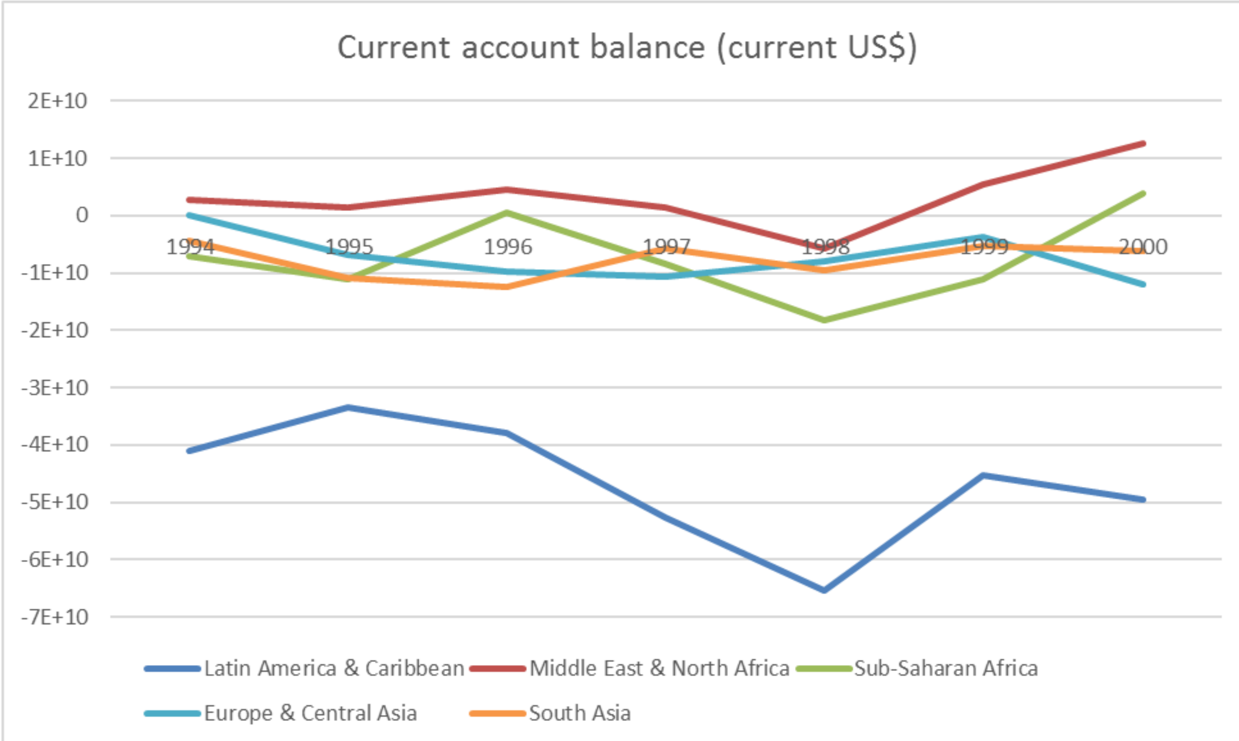
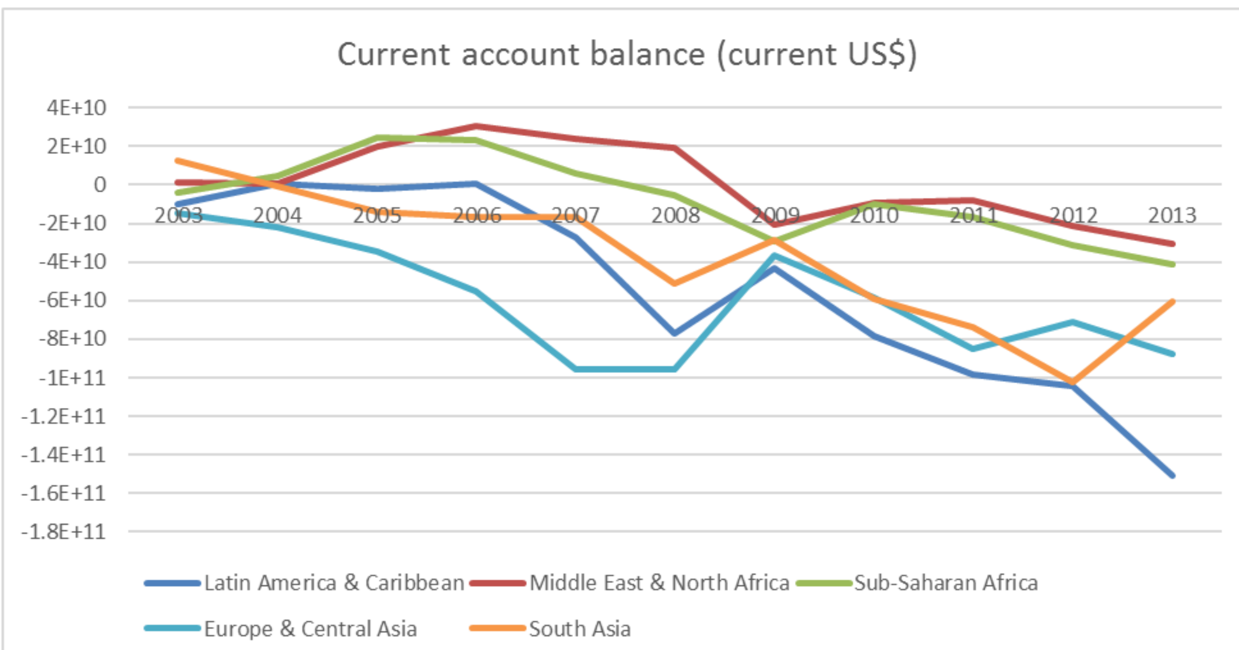
[11] Stock price volatility is the average of the 360-day volatility of the national stock market index.

Figure : 6.12. Current account balance (current US$)[12]

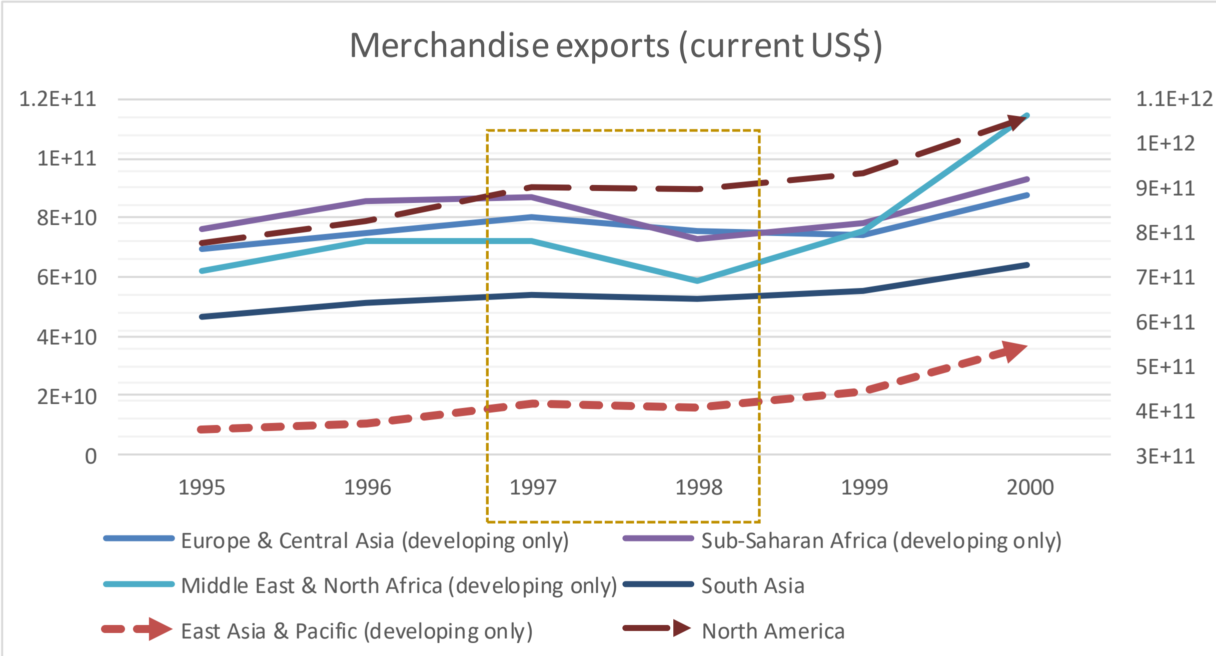


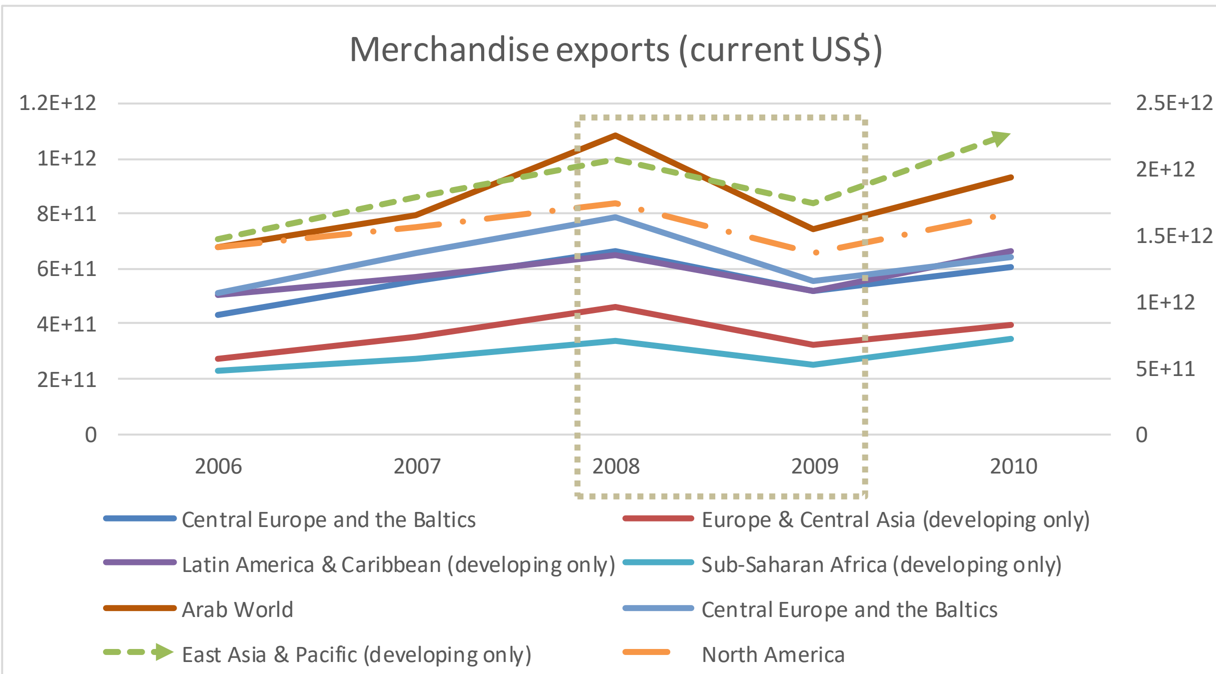


Source: International Monetary Fund, Balance of Payments Statistics Yearbook (Researcher Work).

[12] Current account balance shows the difference between the sum of exports and income receivable and the sum of imports and income payable (exports and imports refer to both goods and services, while income refers to both primary and secondary income).

Figure : 6.13. Merchandise exports (current US$)[13]

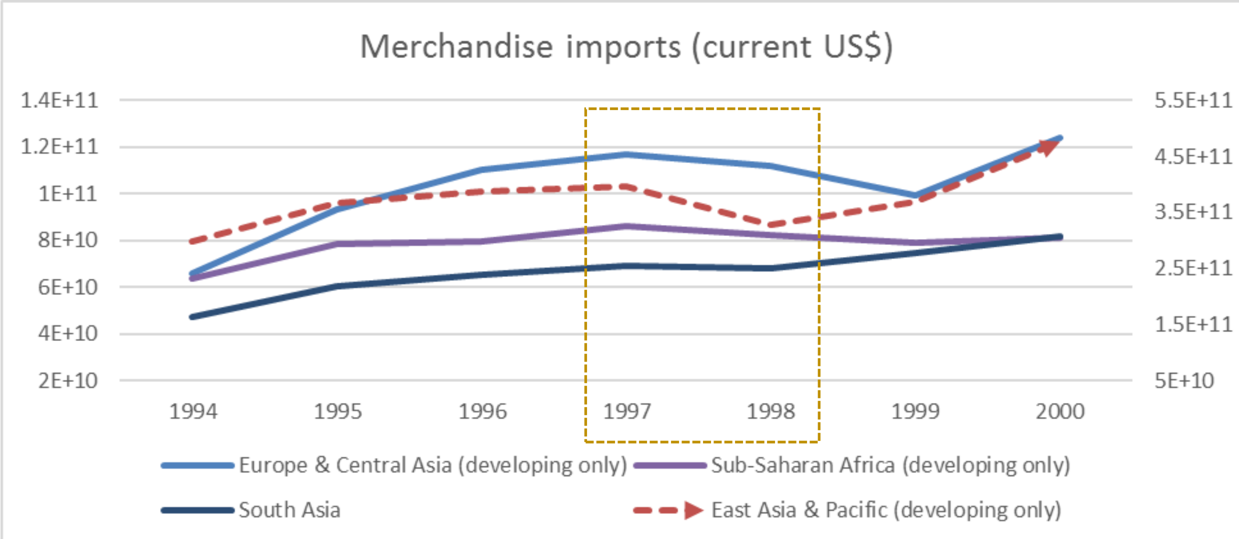


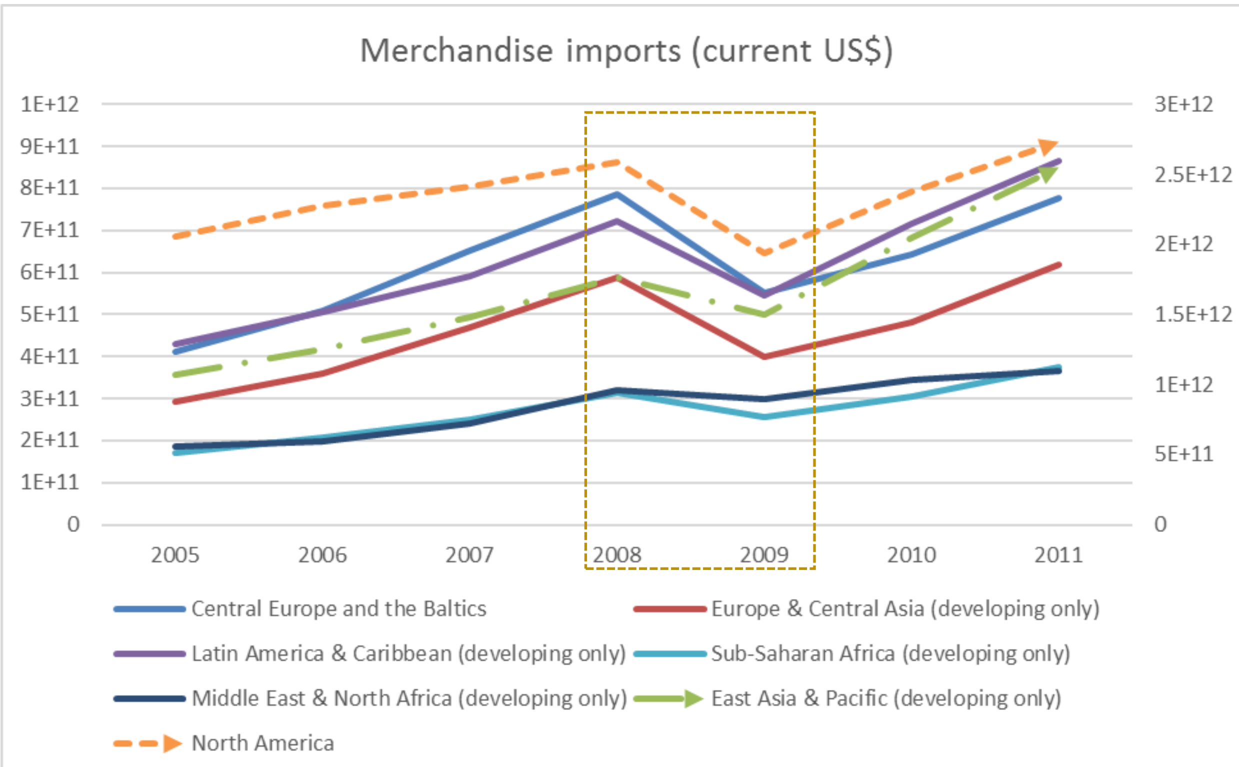


Source: World Trade Organization.

[13] Merchandise exports show the f.o.b. value of goods provided to the rest of the world valued in current U.S. dollars.

Figure : 6.14. Merchandise imports (current US$)[14]





Source : World Trade Organization.

[14] Merchandise imports show the c.i.f. value of goods received from the rest of the world valued in current U.S. dollars.

Data Analysis and Data Interpretation:

6.1. GDP growth (annual %)[15]

During 1997 to 1999, there was a reduction in GDP growth rate in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean, Sub-Saharan Africa and Central Europe and the Baltics, due to Asian Financial Shock.

On the hand, during 2007 to 2009, not only GDP growth rate reduced but it turned negative in all regions. The percentage decrease in GDP growth rate was higher during GFC as compared to AFC. This decrease in GDP spread to the whole World Economy.

6.2. Exports of goods and services (annual % growth)[16]

During 1997 to 1999, the annual growth rate of export of goods and services decreased in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean, Sub-Saharan Africa, Central Europe and the Baltics, and North America. This data reflects that similar trend was observed throughout other regions.

Whereas, during 2007 to 2009, the annual export of goods and services growth rate was found negative, in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean, Central Europe and the Baltics, North America, Euro area, and World Economy. This pattern was witnessed across all regions.

[15] Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

[16] Annual growth rate of exports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

6.3. Imports of goods and services (annual % growth)[17]

During 1997 to 1999, the data reflects that the annual growth rate of imports of goods and services decreased in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean, Sub-Saharan Africa, Central Europe and the Baltics, and North America.

Whereas, during 2007 to 2009, the annual growth rate of imports of goods and services was found negative in all regions.

6.4. Inflation, consumer prices (annual %)[18]

During 1997 to 1999, there was deflationary tendency existing in the Europe and Central Asia, Latin America & Caribbean, Sub-Saharan Africa, Central Europe and the Baltics, and North America.

Similarly, during 2008 to 2009, there was a deflationary trend evident, not only in regions mentioned above but also in Central Europe and the Baltics, Caribbean small states, Arab World, North America, Euro area and World Economy. Additionally, this deflationary tendency reached the point of recession and impacted the entire World Macro Economy.

6.5. Portfolio equity, net inflows (BoP, current US$)[19]

During 1997 to 1998, the net inflow of portfolio equity was found to be negative in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean, Middle East and North Africa, South Asia, and North America.

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[17] Annual growth rate of imports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

[18] Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

[19] Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.

In the same way, during 2007 to 2008, including above stated regions, similar tendency was found in other regions, such as Sub-Saharan Africa, Euro area and World. The scale of net negative inflows of portfolio equity was high during GFC compared to AFC.

6.6. Unemployment, total (% of total labor force)[20]

During 1997 to 1998, the unemployment increased at a moderate rate in Europe and Central Asia, East Asia and Pacific, Latin America & Caribbean and Sub-Saharan Africa.

However, during 2007 to 2009, the unemployment increased with at a very high rate. It also spread to other regions such as South Asia, North America, Caribbean small states, Euro area and World. The impact of GFC on the global economy was far greater than AFC.

6.7. Foreign direct investment, net inflows (BoP, current US$)[21]

During 1997 to 1999, the FDI declined at a moderate rate in Europe and Central Asia, Latin America & Caribbean, South Asia and East Asia and Pacific. Similarly, during 2008 to 2009, FDI reduced significantly in the above stated regions and also in other regions such as Central Europe and the Baltics, Caribbean small states, Arab World, North America, Euro area, Arab World and World Economy. The data also suggests that the impact of the shock spread across all regions in GFC as compared AFC.

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[20] Unemployment refers to the share of the labor force that is without work but available for and seeking employment.

[21] Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. Data are in current U.S. dollars.

6.8. Final consumption expenditure (annual % growth)[22]

During 1997 to 1999, there was a decrease in annual percentage growth of final consumption expenditure in Europe and Central Asia, Latin America & Caribbean, Central Europe and the Baltics and East Asia and Pacific.

Similarly, during 2007 to 2009, there was significant reduction of annual percentage growth of final consumption expenditure in regions as mentioned in the AFC shock and also spread to other regions such as North America, Euro area and World Economy during the GFC.

6.9. Trade (% of GDP)[23]

During 1997 to 1998, the trade percentage of GDP reduced in Europe and Central Asia, Latin America & Caribbean, Central Europe and the Baltics, Sub-Saharan Africa and East Asia and Pacific. On the contrary, during 2008 to 2009, trade percentage of GDP declined in not only the above mentioned regions but also in North America, Euro area, Arab World, South Asia and World Economy. The data reflects that the global financial integration was higher in GFC as compared to the previous crisis.

6.10. Stock market capitalization to GDP (%)[24]

During 1997 to 1998, the stock market capitalization was reducing as a percentage of GDP in East Asia and Pacific, Latin America and Caribbean, South Asia, Middle East and North Africa, and Sub-Saharan Africa. However, during 2007 to 2009, it reduced drastically in the above stated regions and in other regions such as Europe and Central

[22] Average annual growth of final consumption expenditure based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

[23] Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.

[24] Value of listed shares to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is stock market capitalization, P_e is end-of period CPI, and P_a is average annual CPI. End-of period CPI (IFS line PCPI) and average annual CPI is calculated using the monthly CPI values (IFS line PCPI).

Asia, Central Europe and the Baltics, North America, Euro area, South Asia and World Economy.

6.11. Stock price volatility[25]

In Asian Financial Crisis and Global Financial Crisis, the stock price volatility showed an increasing trend in the period of 1997 to 1998 and 2007 and 2008. It shows that stock price volatility has increased severely during both shocks. There were similar trends observed in the sample crisis.

6.12. Current account balance (current US$)[26]

During 1997 to 1998 and 2007 to 2008, the current account deficit (current US $) increased in both crises in Latin America & Caribbean, Sub-Saharan Africa, Euro area, South Asia, Middle East and North Africa and Europe and Central Asia. However, the intensity and scale were higher in GFC as compared to AFC.

6.13. Merchandise exports (current US$)[27]

During 1997 to 1998, the Merchandise export (current US $) has reduced in the Europe and Central Asia, East Asia and Pacific, Sub-Saharan Africa, South Asia, Middle East and North Africa. However, in 2008 to 2009, it has reduced severely in the above mentioned regions and also impacted other regions such as in Latin America & Caribbean, Central Europe and the Baltics and Arab World. The data also reflects that the contagious effect was high in GFC.

[25] Stock price volatility is the average of the 360-day volatility of the national stock market index.
[26] Current account balance shows the difference between the sum of exports and income receivable and the sum of imports and income payable (exports and imports refer to both goods and services, while income refers to both primary and secondary income).
[27] Merchandise exports show the f.o.b. value of goods provided to the rest of the world valued in current U.S. dollars.

6.14. Merchandise imports (current US$)[28]

During 1997 to 1998, the Merchandise imports (current US $) reduced in East Asia and Pacific, Sub-Saharan Africa, South Asia and Europe and Central Asia. However, East Asia and Pacific was affected severely during AFC. One the other hand, during 2008 to 2009, the Merchandise imports (current US $) has been decreased severely not only in the above mentioned regions but also in Latin America & Caribbean, Middle East and North Africa and Central Europe and the Baltics. The data reflects that the impact of negative spillover effects was high during 2008 to 2009 shocks.

7. Inference :

Based on the data anlaysis and data interpretation, it is evident that there is a distinct economic pattern that eventually leads to an economic crisis, having quantifiable similarities. However, this interpretation is based on three case studies and it is not statistically tested.

Further, the data demonstrated that the GFI is higher in GFC in comparison to Asian Financial crises. The trends and pattern of data suggest that the global financial crisis had high contagious effect (Spread effect/herd effect/ spillovers effect) in comparison to others. The study sets the base for the requirment of strong global financial regulatory mechanism in backdrop of global financial integration.

[28] Merchandise imports show the c.i.f. value of goods received from the rest of the world valued in current U.S. dollars.

Annexure : 8.1

GDP growth (annual %)[29]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	4.2	-7.6	10.9	5.1	2	4.1	2.1
1995	5.7	2.7	9.8	0.4	3.2	2.7	2.5
1996	4.5	4.2	9	3.7	5	3.6	6.5
1997	3.5	4.2	7.1	5	3.3	4.5	3.1
1998	2.9	1.7	2.2	2.4	2.1	4.4	6.3
1999	2.2	-1.8	6.2	1.3	2.3	4.7	4
2000	3.9	6.2	7.5	4.6	3.4	4.2	3.8
2001	3	-0.1	6.7	0.6	3.5	1	3.3
2002	3.2	6	7.9	1.9	3.4	1.9	3.8
2003	4.4	6.1	8.8	1.8	4.3	2.7	3.6
2004	5.5	9.2	9	4.9	9.2	3.7	7.3
2005	4.9	7.5	9.7	3.6	5	3.3	5
2006	6.5	7.8	10.8	5	6.1	2.7	5.5
2007	6.4	6.5	12.2	5.1	6	1.8	6.2
2008	3.6	3.3	8.4	3.6	4.5	-0.2	3.6
2009	-3.6	-4.6	7.6	-1.7	2.1	-2.8	3.1
2010	2.1	6.4	9.8	6.1	5.4	2.6	5.3
2011	3.1	6.5	8.5	4.3	4.2	1.7	-1.6
2012	0.5	2.1	7.5	3.2	3.9	2.3	3.3
2013	1.2	3.8	7.2	2.7	4.4	2.2	0.8

Source: World Bank national accounts data, and OECD National Accounts data files

[29] Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Exports of goods and services (annual % growth) [30]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	10.6	6.4	19.9	7.9	3.5	9.8	2.5
1995	18.2	3.9	12.9	10.4	5.2	9.9	-0.6
1996	9	15.5	4.7	9.9	2.7	7.6	4.4
1997	12.4	10.1	17.6	8.5	11.5	11.1	1.5
1998	7	1.6	8	6.4	2.3	4	2.3
1999	2.1	-4	4.6	5.5	1.3	4.6	3.3
2000	16.6	17.4	20.1	10.1	5.5	8.7	6.2
2001	7.8	5.2	4.1	0.1	-2.2	-5.1	0.7
2002	6.1	9.9	13	3	3.7	-1	4.8
2003	10.4	8.2	14.3	4.6	8.2	0.8	6.7
2004	15	14.4	17.2	11.2	5.5	8.6	5
2005	12.6	4.4	18.9	7.8	6.8	5.2	7
2006	15.3	7.4	25.2	6.4	18.6	7	9.1
2007	11.8	9.7	17.2	6.1	0.7	7.4	6.6
2008	4.7	3.5	8.2	0.2	8.8	3.5	3
2009	-10.6	-8	-10.2	-9.1	-15.5	-9.7	-3.3
2010	13.6	8.1	23.5	14	20	10.9	4.5
2011	9.2	9	9.7	7.7	11.9	6.4	-8.7
2012	3.6	6.7	6.1	4.5	-0.4	3.3	2.4
2013	5.8	2.3	7.4	2.8	-3	2.7	-2.1

Source: World Bank national accounts data, and OECD National Accounts data files.

[30] Annual growth rate of exports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Final consumption expenditure, etc. (annual % growth) [31]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	1.2	-5.1	6.7	4.3	2	3.2	-0.1
1995	3.1	1.7	7.4	0.4	3.1	2.4	0.7
1996	3.8	3.7	10.1	3.9	5.2	2.9	3.7
1997	3	3.2	5.8	4.8	2.2	3.5	2.8
1998	3.3	1.7	5.8	2.2	2.8	4.6	3.7
1999	3.3	-1.5	9.1	1.1	1.8	4.8	2.2
2000	2.5	5.1	8.1	4.8	0.9	4.4	4.9
2001	3.3	-1.1	6.2	1.9	6.3	2.7	4.3
2002	4.1	4.5	7.2	1.1	4.2	2.9	4.5
2003	4.4	7.1	6.3	1.5	3.6	2.9	4.1
2004	4.6	9.7	7.8	3.8	10.9	3.4	5.5
2005	4.4	8.1	5.7	3.6	5.3	3	5.7
2006	5.4	6.9	5.1	5.2	3	2.8	5.3
2007	5.8	8.1	8.6	5.5	8.8	2.2	7
2008	3.9	3.5	5.5	4.4	2	0.4	3.4
2009	-1.9	-4	10.4	-1.3	5.2	-0.5	2.5
2010	1	4.5	4.3	7.4	2.9	1.7	3.2
2011	1.1	6.3	8.9	4.1	2.8	1.3	4.8
2012	0	2.5	7.9	3.1	3.3	1.2	3.8
2013	0.6	4.4	6.9	3.2	6	1.8	-0.6

Source: World Bank national accounts data, and OECD National Accounts data files.

[31] Average annual growth of final consumption expenditure based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

Inflation, consumer prices (annual %)[32]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	35.9	NA	6.8	10.9	27.4	1.4	8.2
1995	28.1	82.7	4.6	12.4	11.4	2.5	8
1996	19.8	39	7.2	10.4	7.4	2.3	6.5
1997	8.9	20.4	5.6	7	8.2	2	4.1
1998	8.2	10.5	9.2	6.9	6.2	1.3	3.8
1999	4	20.9	4.5	5.6	4.2	2	2.7
2000	8.9	15.9	2.5	7	4.2	3	2.3
2001	5.7	7.9	5.3	6.4	5	2.7	2
2002	3.3	5.7	3.8	5.2	5.1	1.9	2.7
2003	2.2	4.7	4.7	5.6	6.6	2.5	4.3
2004	3.6	6.9	4.7	4.7	4.1	2.3	3.6
2005	3.3	7.6	6.4	5	7.5	2.8	3.5
2006	3.9	6.6	5.3	4.3	6.9	2.6	4.5
2007	4.8	6.4	5.7	6.1	7.1	2.5	3.9
2008	6.4	10	10.1	8.8	10.7	3.1	12
2009	2.8	3.4	3.7	2.6	6.8	0	2.8
2010	1.8	6.1	3.9	3.9	4.4	1.7	4
2011	4.1	7.3	5.4	5.1	5.9	3	4.8
2012	3.3	3	3.2	4.1	6.6	1.8	6.1
2013	1.4	2.8	3	2.8	5.5	1.2	3.3

Source: International Monetary Fund, International Financial Statistics and data files.

[32] Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

Imports of goods and services (annual % growth) [33]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	6.9	-4	14.6	16.5	6.1	11.2	-14
1995	18.8	2.1	15	4.1	8	7.6	3.8
1996	15.1	10.6	5.2	13.4	9.8	8.1	2.5
1997	15.7	11.2	5.9	13.8	10.3	13.6	0.7
1998	10.5	0.8	-4.7	7.7	3.9	10.5	5.3
1999	2.6	-7.3	3.5	-2	-6.8	9.8	1
2000	13.5	19.8	24.1	14.6	4.2	12.2	4.7
2001	6.2	-4.7	6.6	1.4	9.9	-3.2	8.6
2002	6.8	12.2	14.4	-1.2	9	3.4	9
2003	10.1	14.4	16.6	1.7	9.4	4.4	7.5
2004	16.6	19.7	19.8	9.7	4.1	10.9	12.4
2005	10.7	9.6	13	8.4	7.4	6.5	7.7
2006	16.2	11.9	16.6	12.1	12	6.2	4.9
2007	15.3	17.5	13.1	10.4	20.8	3	12.8
2008	4.8	3.1	6.2	8.6	2.3	-2	11.9
2009	-16.4	-18.9	-1.9	-13.7	-4.7	-13.5	-0.4
2010	12.4	12.3	19.6	23.4	11.7	12.9	3.1
2011	7.5	11.9	11.1	9.5	6.9	5.5	-4.7
2012	0.4	3.6	7.5	4.1	0.1	2.5	5.1
2013	3.6	5.3	8.7	4.5	6.6	1.1	1.3

Source: World Bank national accounts data, and OECD National Accounts data files

[33] Annual growth rate of imports of goods and services based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.

Trade (% of GDP) [34]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	59.5	58.6	53.1	30.5	54	24.3	51.4
1995	70	60.3	51.8	36.7	54.5	25.9	51.2
1996	72.4	63	48	37.9	58.2	26.2	50.1
1997	76.8	65.5	50	37.9	60.4	27.2	52.5
1998	77	56.3	53	38.7	59.4	26.9	49.7
1999	77	57.6	51.5	40	58.3	27.5	51.6
2000	86.5	64.8	58.6	41.7	62.6	29.3	56.4
2001	86.9	68.4	56.6	41.2	65.5	27	56.1
2002	85.3	67	58.5	41.4	63.8	26.2	60.9
2003	89	67.5	64.8	43.4	62.2	26	64.3
2004	96.2	71.4	72.7	45.7	59	27.8	69.6
2005	99.1	67.6	76.2	45.3	61.2	28.8	73
2006	107.7	69.1	76.7	46.2	65.3	30	72.2
2007	109.9	69.1	74	46.2	68	30.8	72.5
2008	108.9	70.8	69.7	47.9	72.8	32.7	75.5
2009	97.3	62.9	56	42.9	62.8	27.3	66
2010	108.9	66.3	61.2	45.9	61	30.6	66.2
2011	118	74.7	61.7	48.6	65	33.3	64.7
2012	121.6	75.4	58.8	49.9	63.5	33.1	66.5
2013	123.1	72.7	56.8	48.4	61.9	32.4	67.6

Source: World Bank national accounts data, and OECD National Accounts data files.

[34] Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.

Unemployment, total (% of total labor force) [35]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	11.8	9.9	4.3	6.4	8.4	6.6	14.1
1995	10.9	9.2	4.3	7	8.3	6.1	14.5
1996	9.9	9.2	4.4	7.2	8.5	5.9	14.5
1997	9.3	9.4	4.4	7.1	8.7	5.4	13.7
1998	9.2	10	4.7	7.5	8.9	5	13.9
1999	10.5	10.4	4.8	7.8	9	4.6	13.1
2000	12.3	10.4	4.6	8	9.1	4.4	14.2
2001	13.3	10.9	4.9	7.8	9	5	14.2
2002	13.7	10.9	4.9	8	8.9	6.1	14.2
2003	13	10.5	4.8	8.1	8.7	6.3	14.6
2004	12.9	10.6	4.9	7.8	8.4	5.8	13.4
2005	12	10.1	4.7	7.6	8.1	5.4	12.9
2006	10.1	9.9	4.6	7	8.2	4.9	12
2007	7.8	9.5	4.3	6.7	7.9	4.8	11.4
2008	6.6	9.2	4.6	6.2	8.2	5.9	11
2009	8.5	10.6	4.6	7.3	8.1	9.3	11.2
2010	9.9	10.2	4.4	7.1	8.1	9.5	11.6
2011	9.8	9.8	4.3	6.5	8.1	8.8	12.7
2012	10	9.5	4.4	6	8.1	8.1	12.8
2013	10.1	9.3	4.5	6.1	7.9	7.4	12.8

Source: International Labour Organization, Key Indicators of the Labour Market database.

[35] Unemployment refers to the share of the labor force that is without work but available for and seeking employment.

Foreign direct investment, net inflows (BoP, current US$) Billions (0.000) [36]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	5.305	2.269	45.564	21.019	3.477	54.354	2.439
1995	12.488	3.461	50.797	20.452	4.366	67.119	0.907
1996	11.295	3.89	58.565	29.692	4.089	96.155	1.356
1997	14.26	7.489	62.61	44.925	8.447	117.148	1.948
1998	19.558	7.907	57.849	56.592	6.828	201.875	2.641
1999	21.803	6.638	50.395	52.107	8.896	314.292	1.915
2000	23.616	6.293	45.187	58.56	6.553	387.485	3.92
2001	20.475	10.723	48.928	61.393	13.979	194.773	3.044
2002	25.803	9.866	59.367	49.659	11.111	106.428	8.061
2003	17.04	15.614	59.336	36.687	13.588	70.969	10.255
2004	38.404	25.743	77.767	53.664	11.273	146.056	10.552
2005	52.66	40.992	129.312	59.478	18.369	164.271	18.171
2006	79.045	67.826	161.645	60.56	15.384	354.494	30.38
2007	149.213	89.171	193.495	103.393	27.995	460.622	33.638
2008	138.107	92.11	211.236	111.606	39.188	395.068	35.606
2009	31.461	54.999	155.397	71.41	34.572	177.521	29.22
2010	19.83	44.27	297.952	103.773	25.333	288.163	25.895
2011	47.942	65.999	336.401	132.124	39.155	297.284	16.165
2012	38.284	55.505	303.814	139.324	33.239	271.346	23.007
2013	14.757	48.306	360.8	168.701	36.536	357.97	24.157
2014	48.233	44.529	349.997	161.647	44.033	188.98	22.068

Source: International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.

[36] Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. Data are in current U.S. dollars.

Merchandise exports (current US$) Billions (0.000)[37]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	76.137	53.991	289.194	138.416	64.875	678.035	57.435
1995	97.623	69.518	354.788	166.354	76.507	776.996	62.089
1996	103.948	74.677	369.486	187.142	85.876	826.774	71.821
1997	111.035	79.963	416.388	211.753	86.765	903.661	72.075
1998	122.744	75.356	406.903	215.796	72.498	896.51	58.467
1999	122.264	73.879	443.913	233.415	78.466	934.294	75.745
2000	138.839	87.877	544.015	275.237	93.203	1058.604	114.831
2001	153.395	94.969	532.534	269.32	87.944	988.994	99.488
2002	175.522	106.487	608.423	276.181	93.456	945.553	99.587
2003	227.229	137.457	753.966	300.191	114.149	997.562	120.049
2004	304.459	187.343	964.684	359.271	153.724	1131.71	158.285
2005	354.526	223.256	1189.688	429.458	191.628	1261.606	213.199
2006	433.927	274.323	1467.94	503.92	226.092	1414.172	268.437
2007	554.471	350.885	1788.323	567.73	269.093	1568.919	314.508
2008	663.288	457.409	2083.933	646.947	339.319	1743.937	418.27
2009	515.218	322.858	1748.114	517.513	250.196	1372.165	282.596
2010	605.937	393.118	2279.531	666.32	344.648	1665.991	353.687
2011	741.005	515.432	2733.363	821.893	431.58	1933.856	411.782
2012	715.464	530.867	2898.275	841.509	422.649	2001.306	425.572
2013	766.017	532.733	3075.683	846.398	411.498	2037.924	372.07
2014	799.343	524.188	3238.489	840.012	393.235	2097.464	352.618

Source: World Trade Organization.

[37] Merchandise exports show the f.o.b. value of goods provided to the rest of the world valued in current U.S. dollars.

Merchandise imports (current US$) - Scale: Billions (0.000)[38]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1994	90.626	66.057	297.391	167.984	63.801	844.838	72.228
1995	119.163	93.149	366.131	188.261	78.298	939.828	78.01
1996	138.026	110.539	386.671	210.911	79.414	997.752	82.984
1997	149.845	116.724	395.437	246.95	86.126	1100.512	82.331
1998	163.106	111.733	328.914	264.354	82.439	1151.048	86.485
1999	159.374	99.281	368.094	264.423	79.135	1280.335	84.84
2000	177.371	124.195	475.678	311.709	81.174	1504.806	93.042
2001	192.103	117.76	479.286	307.614	85.038	1407.191	98.842
2002	215.366	135.141	549.907	302.084	84.212	1428.476	101.295
2003	276.243	179.204	693.984	309.975	109.095	1548.904	112.854
2004	359.374	244.871	908.107	366.1	139.632	1806.599	156.501
2005	411.453	292.137	1070.109	429.918	171.577	2056.102	185.073
2006	507.839	361.046	1249.126	506.763	206.14	2278.171	196.666
2007	652.923	470.128	1477.718	592.337	248.522	2411.758	241.209
2008	785.686	587.39	1764.37	721.166	312.498	2589.657	320.856
2009	551.665	399.68	1496.678	545.59	256.137	1936.267	297.383
2010	643.068	481.155	2051.216	715.132	304.328	2372.846	342.906
2011	777.779	617.261	2548.794	863.967	376.16	2730.564	364.122
2012	735.819	622.442	2681.284	894.337	397.269	2812.364	392.32
2013	767.672	639.261	2841.026	926.634	416.456	2804.372	387.276

Source: World Trade Organization.

[38] Merchandise imports show the c.i.f. value of goods received from the rest of the world valued in current U.S. dollars.

Portfolio equity, net inflows (BoP, current US$) Billions (0.000) [39]

Time	Central Europe and the Baltics	Europe & Central Asia (developing only)	East Asia & Pacific (developing only)	Latin America & Caribbean (developing only)	Sub-Saharan Africa (developing only)	North America	Middle East & North Africa (developing only)
1991	0	0.147	0.038	6.911	-1.447	9.564	0.034
1992	0	0.35	0.456	6.486	-0.181	-4.78	0.047
1993	1.637	0.57	4.484	17.509	0.894	30.274	0.044
1994	0.855	0.99	1.507	12.313	0.19	5.608	0.244
1995	1.397	0.194	3.746	3.642	2.998	13.446	0.032
1996	1.917	0.242	5.043	9.178	2.468	16.957	0.174
1997	2.539	0.514	4.132	8.77	5.579	72.494	0.621
1998	3.542	-0.167	-3.053	-2.727	8.667	51.603	-0.051
1999	1.671	0.638	1.263	6.208	9.072	122.011	0.698
2000	0.818	0.721	6.589	3.663	4.198	217.839	0.265
2001	0.471	0.069	1.768	2.636	-0.908	124.177	-0.025
2002	-0.812	0.111	3.838	1.884	-0.354	53.153	-0.443
2003	0.827	1.111	12.486	2.808	0.746	43.928	0.221
2004	4.307	1.5	19.312	-0.357	6.694	88.933	0.713
2005	-0.439	6.636	26.01	10.661	8.162	96.823	2.424
2006	0.61	5.728	55.217	10.45	16.811	155.045	0.963
2007	-3.821	8.498	35.978	26.595	10.166	233.74	-2.096
2008	-1.464	-0.21	-12.374	-11.067	-5.626	129.949	0.431
2009	2.07	3.001	39.426	41.343	10.754	242.696	1.28
2010	7.301	3.922	39.887	39.449	15.972	196.984	2.017
2011	3.475	-0.466	7.126	3.045	4.918	144.661	-0.457
2012	4.447	6.856	34.699	18.641	9.89	240.003	-1.26
2013	4.04	3.135	28.635	13.212	7.807	-49.594	0.449
2014	3.813	2.758	50.792	20.501	5.363	178.147	1.075

Source: International Monetary Fund, Balance of Payments database, and World Bank, International Debt Statistics.

[39] Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.

Current account balance (current US$) Millions (0.0)[40]

Time	Latin America & Caribbean	Middle East & North Africa	Sub-Saharan Africa	East Asia & Pacific	Europe & Central Asia	South Asia
1994	-41110.2	2801.9	-7086.9	-11373.9	137.3	-4409.2
1995	-33512.6	1349.7	-11176	-29099.4	-6911	-10880.4
1996	-37804.1	4534.7	461.7	-25986.4	-9677.3	-12400.3
1997	-52675.5	1336.8	-8312.7	16332.3	-10586.4	-5780.6
1998	-65456.7	-5776.8	-18294.5	59014.4	-7963.4	-9503
1999	-45196.7	5477.9	-11065.9	49922.1	-3659.9	-5231.3
2000	-49536.1	12619.6	3941.2	45054.2	-11921.6	-6217.8
2001	-49988.3	2260.9	-3931.7	35397	-1352.6	2313.9
2002	-31844.7	-681.4	-4475.9	53738.9	-3829.9	11596
2003	-9946.5	1593.6	-4270.4	67202	-14650.5	12555.4
2004	630.8	902.2	4448.3	88572.8	-21919	-985.4
2005	-1926.2	19948.1	24323.1	146724.9	-34846.7	-14152.1
2006	531.1	30616.9	23117.9	278493.3	-55506.4	-16695.1
2007	-27118.9	24026.7	5847.8	410970	-95519.8	-16844
2008	-77116.9	19138.5	-5137.2	450724.9	-95472.7	-50933.6
2009	-42980.7	-20732.6	-29016.1	308653.9	-36572.3	-28716
2010	-78246.4	-9030.4	-9667.6	281952.6	-58644.8	-59219.1
2011	-98647.5	-7702.3	-16952.9	180446.4	-84931.2	-73742.6
2012	-104348	-21163.5	-31440.9	215624.4	-71051.5	-102523
2013	-151080	-30567.5	-41285.4	172364.3	-87801.1	-60293
2014	-175446	-22001.4	-52900.1	240307.8	-53889.9	-38702.4

Source: International Monetary Fund, Balance of Payments Statistics Yearbook.

[40] Current account balance shows the difference between the sum of exports and income receivable and the sum of imports and income payable (exports and imports refer to both goods and services, while income refers to both primary and secondary income).

Stock market capitalization to GDP (%) - Unit (0.0)[41]

Time	East Asia & Pacific (developing only)	Sub-Saharan Africa (developing only)	World	South Asia	Middle East & North Africa (developing only)	Latin America & Caribbean (developing only)	Europe & Central Asia (developing only)	Euro area
1994	77.4	18.8	22.5	22	10.4	14.4	7.3	23.4
1995	54	23.2	19	17.7	14.6	12.7	1.6	21.1
1996	34.4	14.9	20.6	13.5	17.7	13.2	3.7	25
1997	24.2	14	19.9	10.9	22.3	15	3.5	28.8
1998	21.4	13.1	20.9	10.5	20.3	13.7	4.8	40.5
1999	33.2	12.9	26.9	9.5	24	14.3	5.7	56.4
2000	34.6	10.1	30.8	8.7	25.3	18.4	5.3	64.3
2001	27.4	10.9	25.4	7.5	23.6	19.6	4.4	59.2
2002	33.5	9.9	22.9	8.6	22	17.1	5.1	52.3
2003	35.8	11.9	27.1	11.4	21.5	15.7	6.1	40.3
2004	28.3	12.9	26.1	14.6	29.5	17.9	9.2	43.1
2005	31.8	14.4	33.7	19.1	55	22.9	13.3	54.4
2006	45.7	15.4	41.9	23.3	58.5	25.8	24.8	60.6
2007	59.7	33.9	54.7	32.4	85.2	29.3	31.3	69.8
2008	47.5	35.7	41.3	29.4	76.2	26.8	23.7	53.3
2009	38.2	27.1	33	15.3	39.4	25.1	14.4	33
2010	60.4	24.5	34.7	28	36.5	20.2	16.6	27.2
2011	58.6	23.7	30.4	24.8	28	18.6	14.8	31.8
2012	44.1	22.2	30.8	20.1	23.4	24.6	11.7	36.5
2013	NA	NA	NA	NA	NA	NA	NA	NA

Source: Global Stock Markets Factbook and supplemental S&P data, Standard & Poor's

[41] Value of listed shares to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is stock market capitalization, P_e is end-of period CPI, and P_a is average annual CPI. End-of period CPI (IFS line PCPI) and average annual CPI is calculated using the monthly CPI values (IFS line PCPI).

Stock price volatility - Unit (0.0) [42]

Time	East Asia & Pacific (developing only)	Sub-Saharan Africa (developing only)	World	South Asia	Middle East & North Africa (developing only)	Latin America & Caribbean (developing only)	Europe & Central Asia (developing only)	Euro area
1994	24.2	NA	17.9	16.7	NA	33.3	55.4	16.7
1995	23.3	NA	17.7	19.2	5.1	32.9	50.6	15.4
1996	17.7	11.1	15.8	16.5	4.3	28.3	39.9	13.8
1997	19.8	12.4	16.4	17.5	11.7	20.6	39.8	15.9
1998	41.1	23.9	23.5	20.8	12.4	30.1	73.6	23.5
1999	43.1	10.2	27.7	30.5	14.1	36.8	64.5	27.6
2000	30.7	12.1	22.7	28.1	15.3	34.1	57.6	22.2
2001	26	13	22.8	23.1	16.9	26.5	40.2	21.8
2002	23.8	12.8	22.7	24.4	17.6	20.6	44.7	25.9
2003	20.3	14.3	21.6	23.3	13.1	18.4	27.5	26.1
2004	19.2	17.1	18.5	23.2	15.7	16.8	23.5	17.7
2005	20.1	13.8	15.3	22.8	24.2	15.3	27.4	12.9
2006	20	16.2	16.6	21.8	26.3	19.1	27.1	12.3
2007	23.4	20.8	18.6	23.8	20.9	22.6	22.4	15
2008	28.4	18.9	23.5	21.7	18.6	24.4	28.9	23.3
2009	32.4	24.6	35.6	28.6	24.1	26.4	39.1	36.7
2010	25.5	15.9	25.5	22.6	16.2	17	28.8	27.8
2011	20.7	10.9	17.7	16.8	11.3	15.4	20.6	22
2012	20.7	10.2	19.2	16.4	9.7	18.8	19.8	24.2
2013	17.2	9.9	15.2	13.1	7.8	14.5	15.4	18.6

Source: Bloomberg

[42] Stock price volatility is the average of the 360-day volatility of the national stock market index.

9. Conclusions and Suggestions

Conclusions

The global financial crisis was not a one time loss but its impact has been experienced in recent stock market crash in China in August 2015. The negative spillover effects of GFC was extremely high in comparison to other sample crises in this study. The Asian Financial Crisis, Euro Crisis and Global Financial Crisis show that the Global Financial Integration (GFI) has increased in the global financial system. The global financial regulatory system has continuously evolved during the pre and post global financial crisis. The attention of policy makers have moved towards Macro-Prudential Regulation. Summarized research outcome of the research questions are as follows:

What were the causes of the Global Financial Crisis?

The important causes of global financial crisis were asset price bubble, systemic risk and global financial integration. The spillover effect of the crisis increases when the infected county is linked with other country/countries via trade or finance. The degree of spread depends on the intensity and scale of external shock. In the GFC, the scale of shock was so high that it spread across the World Economy at a very fast pace.

Global Financial Integration (GFI) is beneficial when one region is growing and it leads to increasing growth of the interdependent region and that interdependent region further increases the growth of other interdependent regions. The present global village exhibit the positive benefit of this interlinkage where the world economy is growing, and other interdependent countries are also showing a parallel growth. However, the offside to this interlinkage is the impact that arises due to external shock and systemic risk, resulting in the spread of negative externalities to all interdependent countries through the finance and trade route. A minor external shock spillover has multiplier and cascading effect from one region to another and ultimately spread globally.

What was the structure of global financial regulatory mechanism at the time of Pre-GFC (2007-10) period?

The global financial regulatory mechanism was driven by Micro-Prudential Regulation that concentrated on the stability of the individual financial sector. Their mandate was to promote and incentivize international financial integration which they pursued, but while doing so, they failed to fulfill requirement of developing appropriate guidelines and standards, such that, financial integration was inadequately regulated. In the national jurisdiction, examples of substantive regulatory gap are visible in Systemically important financial institutions (SIFIs), shadow banking, and OTC derivatives markets.

What structural changes have occurred in the global financial regulatory system in Post-GFC (2007-10) period?

The establishment of Financial Stability Board (FSB) as a Global Macro-Prudential Regulator in the G-20 London Summit 2009 was the first step of restructuring in GFRS. The FSB has provided the missing link of coordination and harmonization with Micro-Prudential Regulator. The FSB and IMF synchronization in early warning exercise has strengthened monitoring and provides adequate firewall in response to systemic risks. The restructure in IMF SDRs quota sharing and New Arrangement to Borrow was designed to improve representation of under-represented countries. However, IMF restructuring would have been better, if IMF had enhanced reforms in the composition of the executive board, fund governor and staff appointment.

What is the next stage of reform required in the existing GFRS?

The GFRS faces issues of weak compliance. In the light of enforcement, most agreements are informal and soft law in nature. For enhancing compliance in GFRS, there is need to bring in the force of law within the formal treaty, convention or similar formal instruments in international law and the compliance needs to shift from consensus based model to rigorous compliance as done by WTO. The FSB should move gradually towards the role of a global supra financial regulator or World Financial Organization.

Based on the above analysis, this study concludes that the global financial integration *per se* is not wrong. The GFI should be institutionalized with strong Macro-Prudential Regulatory Mechanism. The global financial regulatory framework is a dynamic process, where international financial integration needs to be addressed with effective standards and norms. With effective regulation not in place, global integration will benefit the economy only at the time of boom but in times of bust/crisis, negative cascading effect will be multiplied and spread losses globally. There have been financial crises before the GFC and same will be continued, if global financial regulatory mechanism is not updated and upgraded from time to time.

Suggestions

1. Suggestion: The Macro-Prudential Regulator must engage effectively with large number of non-member jurisdictions.

1.1. Explanation: The FSB must persuade deliberations and discussions on the issues of non-member jurisdictions. It must organize regional meetings with regulators from non-member jurisdictions and routinely provide them with information on the agenda for FSB meetings, papers, and outcomes. It must regularly publicize its report, including on the issues where it cannot reach a consensus. The IMF must be open about the deliberations of non-member jurisdictions. Mostly, the internal debates at the Executive Board level are obscured. In addition, many documents are not released until the decision have been made. These information must be made available in the public domain.

2. Suggestion: The FSB and the IMF must work in close association as Macro-Prudential Regulators.

2.1 Explanation: Both the Macro-Prudential Regulators, FSB and IMF, possess overlapping missions and mandates, thus, both must have mechanism for mutual interaction. The present study suggests that the FSB must report its policies and practices to the IMF's International Monetary Financial Committee (IMFC) in addition to G-20 Head of the States. This mechanism would also resolve the issues of legitimacy. There can be the possibility of shifting the FSB Secretariat and place it under the auspices of the IMF. This will enhance the authenticity and reliability of FSB without any challenge. The IMF has vast experience, resources and in-house expertise in effective surveillance of global financial system, from which FSB can benefit.

The study suggests an other alternative that the deliberation practice between the IMF and FSB must incorporate an independent panel of expert to review the works of both the institutions, based on their individual mandates. Both the institutions must have separate forums or committees, each for developing countries and advanced countries, to look after issues *per se*, which will improve legitimacy and the rule of law in GFRS.

3. Suggestion: Adequate incentive must be provided to member jurisdictions for the implementation of updated and upgraded reform as adopted time to time in GFRS.

3.1. Explanation: There can be a proposal of incentivizing member jurisdictions materially and non-materially for implementing policies and set of standards. This proposal will create more give and take negotiations among countries to increase competitive element in GFRS. This will lead to execution of updated standards/principals time to time in the member jurisdictions.

4. Suggestion: The global financial regulatory mechanism enforcement must switch gradually from flexibility (soft law) to rigidity (hard law).

4.1. Explanation: The regulation in GFRS is enforced through consensus-based model within member jurisdictions. These standards and principles are soft law in nature without any formal agreement, treaty, or convention in international law. It creates free rider problem. The compliance mechanism must be shifted from consensus-based model to sanction based model, as done by WTO Dispute Settlement Panels or hard international law.

5. Suggestion: The GFRS actors must not trade-off between short term stability with compromising on long-term sustainability.

5.1. Explanation: The combination of the Micro-Prudential Regulator, Macro-Prudential Regulator, and the G-20 countries will not work to resolve the problem of systemic risk. This is because a micro perception may not work out to be same at the macro level. In micro level, there is always a tradeoff between short-term stability over long-term sustainability; whereas, at macro level long-term sustainability is preferred over short-term stability. Strong political will is required by the advanced countries on issues of long-term sustainability, where new negotiations will need to take place with regard to IMF quota, voting share and other matters, related to legitimacy and the rule of law question prevailing in GFRS.

6. Suggestion: The GFRS must provide standard guidelines for the instruments where two-three Micro-Prudential Regulators are involved.

6.1. Explanation: The FSB must play an important role where two-three Micro-Prudential Regulators are involved in instruments such as shadow banking and other structural finance product. The structural finance product does not fall under the exclusive mandate of one regulatory agency such as Collateralized Debt Obligation (CDO), Credit Default Swap (CDS), Mortgage-Backed Security (MBS) etc. That is why the FSB, with diverse membership, provides value addition by filling regulatory gaps in the gray areas. Therefore, the FSB must provide a forum to Micro-Prudential Regulators, for coordination and cooperation, to address emerging issues in their respective fields of expertise and jurisdiction. They can resolve the issues through discussion and deliberation process.

7. Suggestion: Micro-Prudential Regulators and Macro-Prudential Regulators must be accountable to their member jurisdictions.

7.1. Explanation: The global financial crisis clearly reveals lack of accountability in GFRS. Neither the IMF nor the other Micro-Prudential Regulators had policy frameworks to address the financial fiasco in an appropriate manner, despite the experience of previous financial crisis. There is no procedure in the GFRS to hold organizations like IMF and other Micro-Prudential Regulators accountable in the aftermath of a crisis. The fact of the matter is that if the IMF and the FSB are instituted for delivering their mandates, then there must be mechanism to safeguard stability during a crisis. These institutions are legal entities, and they (including their governing bodies and staff) must be aware of the fact that they are accountable for failing in legal directives. The accountability and transparency must be measured in the true sense in GFRS.

8. Suggestion: The World Bank, OECD, BIS and IMF must develop centralized International DataBank hub for looking after data adequacy and data accuracy issues in GFRS.

8.1. Explanation: There are various issues with regard to data availability, accuracy and reliability in GFRS. Due to fragility and fragmentation in GFRS, the data lacks consistency and accuracy which may lead to externalities problem. The centralized International DataBank hub will improve financial forecasting and future plan of actions. Though, World DataBank has enhanced efficiency in data availability, a centralized international databank hub must be develop to improve data accuracy and data integrity.

9. Suggestion: The GFRS must provide complete information of policies and practices.

9.1. Explanation: The GFRS must provide complete information to global financial actors and avoid falseness and misrepresentation in the practice of international standards. This will ensure that the supervisor along with market participants are better informed. As of now, due to bilateral treaties, confidential information are not accessible, which is required for surveillance function. The legal privilege and immunities must be given to the international regulator for the disclosure of confidential information, for better investigation purpose. In fact, the accurate information about markets will improve legitimacy in GFRS. The FSB must provide a forum for information disclosure so that market actors and financial authorities can have most recent information, related to short-term capital flows, interest rate, and international investment. This would lead to harmonization of national norms with international standards. However, the Micro-Prudential Regulators along with the FSB have made significant efforts in the adoption of general disclosure in public companies, financial institution, and other stakeholders.

10. Suggestion: The global financial regulation must be dynamic (continually restructured) as per the identified supervisory arbitrage. Global financial regulation should go hand in hand with dynamic transform in International Finance.

10.1. Explanation: The lack of the up-gradation in global financial norms can create the conditions for 'regulatory arbitrage'. The FSB must involve Micro-Prudential Regulators to oversee such inconsistency and to address the issues of regulatory leakages.

The depth and breadth of global financial integration increased at a much faster speed than the changes in regulations. There is always a time lag between the development of suitable regulations/standards and the dynamic change in Global financial integration. All possible measures need to be explored and implemented to minimize the time lag such that regulations can match the pace of the dynamic of Global financial integration.

11. Suggestion: The universal membership must be representative based on one member one vote in GFRS.

11.1. **Explanation:** The method of allocation of quota by using the weighted mean method needs to be reworked for better allocative efficiency purpose. There must be a mechanism where equals must be treated equally (developed comparison with developed world not with LDCs – Horizontal Equity) and unequal must be treated rationally/reasonably (LDCs must compared with LDCs not with Developing word – Vertical Equity), otherwise, universal membership will not be achieved.

12. Suggestion: There is a possibility of evolving a supranational authority/ World Financial Organization/ World Financial Authority.

12.1. Explanation: The World Financial Organization (WFO) must have the power to make an agreement with domestic financial authorities on behalf of the Micro-Prudential Regulator. This agreement may be used for further exchange of information in investigations and enforcements across multi-jurisdictions. The WFO will provide a single linkage for international financial transactions worldwide. The nature of disputes dealt by the WFO will be multi-jurisdictional.

The stringency of domestic regulation varies from one jurisdiction to another. The less stringent jurisdiction provides an incentive for riskier activities compared to the more stringent jurisdiction. There is requirement for a jurisdictionally competent global regulator in the financial system as a whole. There is also a possibility to restructure the FSB on the lines of the WFO. The FSB jurisdictional competence will prevent market failure, market abuse and financial offense at the global level.

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