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**Session 8: Financial Crisis and Global
Financial Governance: A Network Analysis**

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Opinions are personal to author

Key Issues

- 1. Current global financial turmoil brings into question the existing regulatory and financial architecture.**
- 2. What lessons can Asia learn from the current turmoil and markets?**
- 3. Will G20 Reforms be sufficient to meet new requirements and Emerging Market needs?**

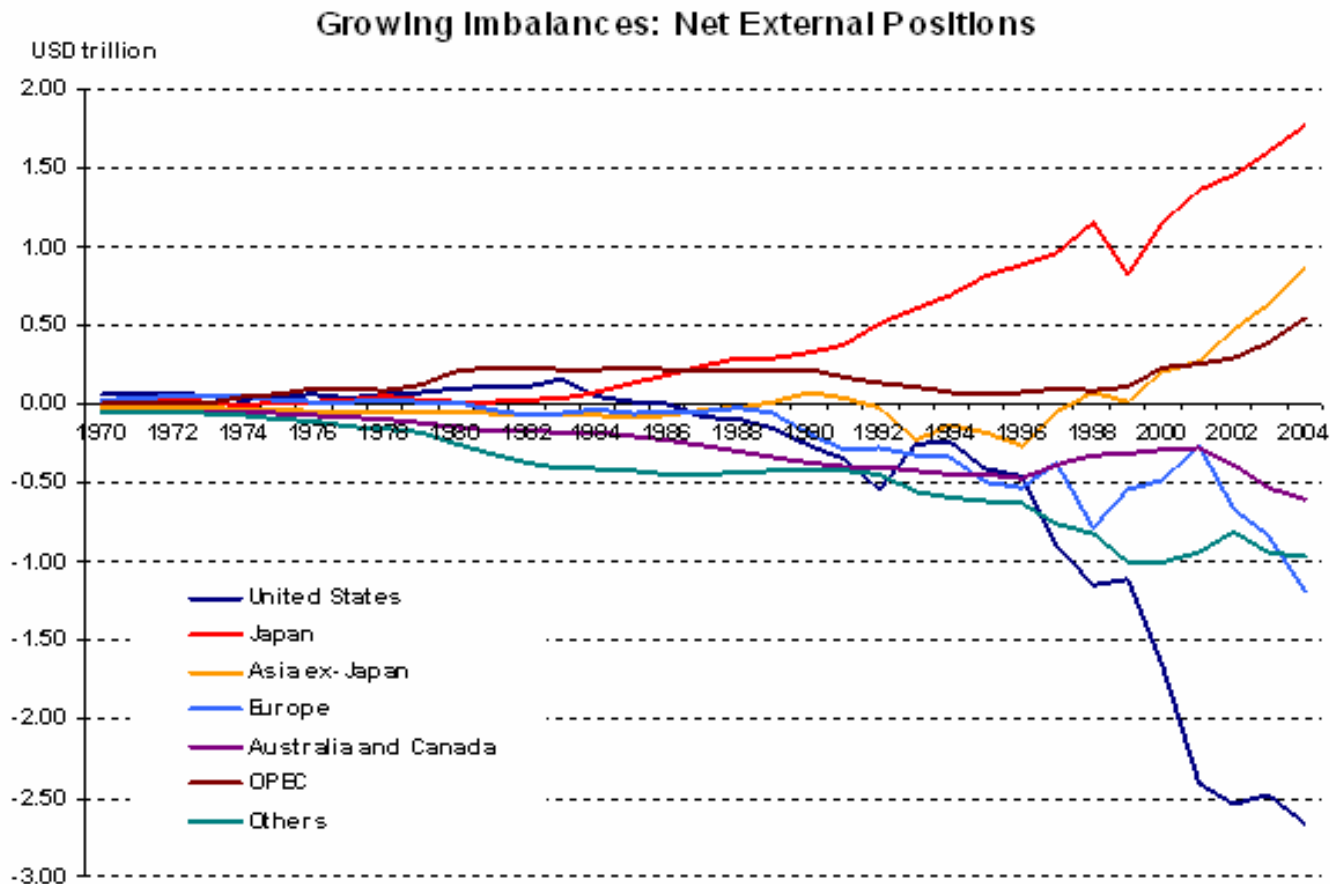
The latest IMF analysis considers that the root causes of the current crisis lay in :

- “market failure.... bred by a long period of high growth, low real interest rates and volatility and policy failures in financial regulation – which was not equipped to see the risk concentrations and flawed incentives behind the financial innovation boom; macroeconomic policies – which did not take into account building systemic risks in the financial system and in housing markets; and global architecture – where a fragmented surveillance system compounded the inability to see growing vulnerabilities and links .”
- International Monetary Fund: *Initial Lessons of the Crises*, February 2009
<http://www.imf.org/external/pubs/ft/survey/so/2009/pol030609a.htm>

Macro - Great Moderation created Great Complacency

- **Supply-side shock of entry of 3 billion workers into global markets, plus trade liberalization, technology productivity gains and improvements in business models created period of high growth and low inflation.**
- **Loose monetary policy, excessively low interest rates, excess liquidity and easy bank credit created bubbles in asset markets.**
- **Financial Engineering, permitted by (a) liberal regulation (b) accounting standards (c) securitization enabled high leverage, disguised the level of Over-Trading, Illiquidity and Vulnerability of Households and highly leveraged financial institutions.**

US Current Account Deficit is a Mirror Image of the Asian Surplus



Asian and oil exporting nations are counterparty to large United States current account deficit.

Source: World Bank Financial Structure Dataset, February 2006

Montek Ahluwalia: Reforming the Global Financial Architecture 1999

Nature and Causes of Contemporary Crises

- Crisis Prevention in the New Architecture
- Improving Macro-economic Management
- Increasing Availability of Information and Strengthening Surveillance
- Strengthening the Financial Sector in Developing Countries
- International Action to Strengthen the Financial System

The Choice of Exchange Rate Regime

- Control over Capital Movements
- Crisis Resolution in the New Architecture

The Role of the IMF in Crisis Resolution

- Private Sector Involvement
- Debt Restructuring and Crisis Resolution

Governance Structure for the New Architecture

Global Four Mega-trends

1. **Wage Arbitrage** - cheap labour created low inflation and boosted global trade
2. **Interest Rate Arbitrage** - Low interest rates e.g. in Yen, gave rise to Carry trade,
3. **Knowledge Arbitrage** - Financial Engineering permitted faster trading and higher leverage
4. **Regulatory Arbitrage** - Accounting, Tax and liberal regulation allowed “shadow banking”, disguised leverage through SIV, OTC markets etc.

These led to four excess liquidity, leverage, risk-taking and greed.

All four lines of defense for financial stability failed.

- **Board, bank management and internal controls - failed to prevent leading banks from taking on too much risk.**
- **Auditors, legal advisors and rating agencies - did not stop and check the risks building up in toxic products, excessive remunerations or at the counterparty levels.**
- **Financial regulators, standard-setters and central banks - under-estimated the systemic impact of the crisis and were caught with ad hoc and uncoordinated crisis responses that did not help market confidence.**
- **Market discipline, include the media and public opinion - was if anything more pro-cyclical than anti-cyclical.**

The current crisis should be viewed as a Network Crisis.

- **Reviews:**

- Group of Thirty Report on Financial Reform, www.group30/pubs/reformreport.pdf, January 2009

- Geneva Report No. 11, Fundamental Principles of Financial Regulation, www.voxeu.org/index.php?q=node/2796

- The de Larosiere Group, Report on Financial Supervision, February, 2009, www.ec.europa.eu/internal_market/finances/docs/de_larosiere_report_en.pdf

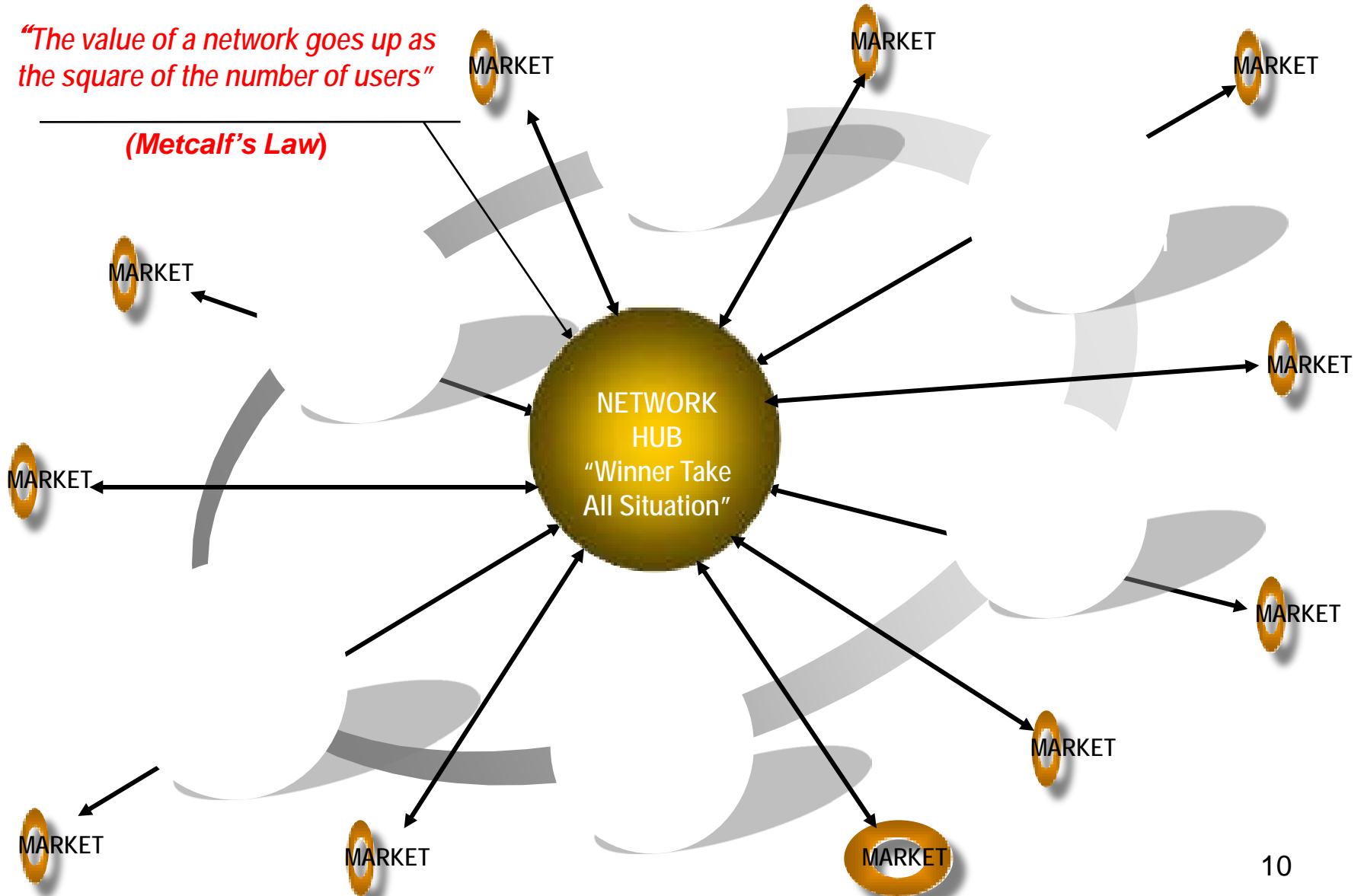
- The Turner Report

- www.fsa.gov.uk

The Global Network Economy

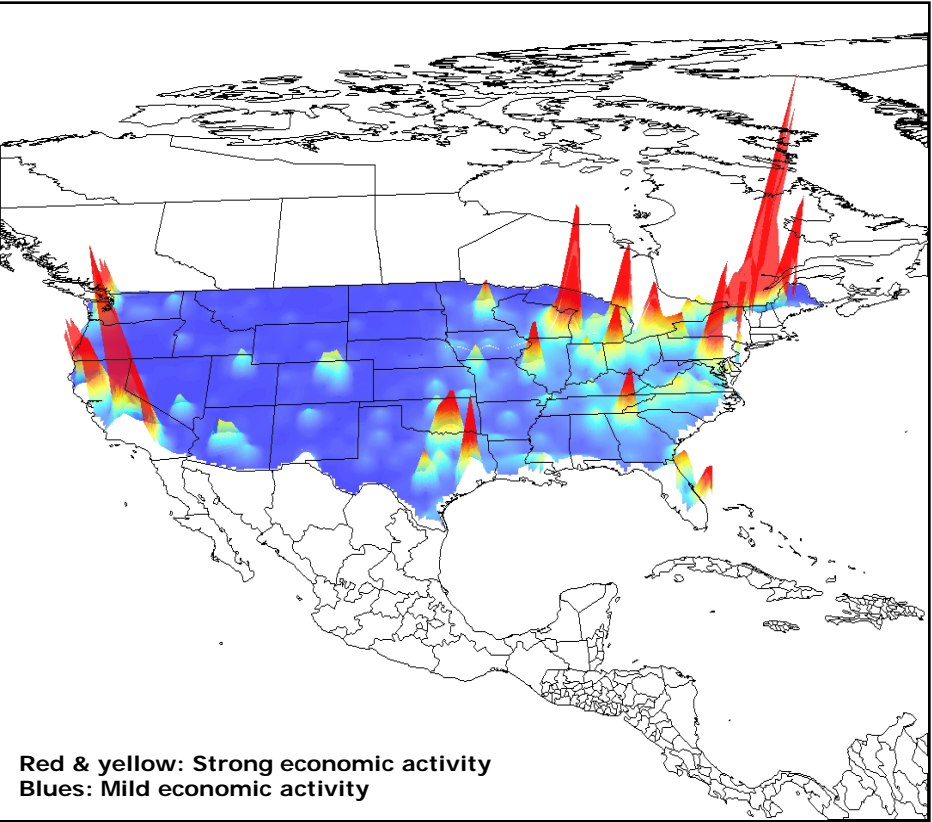
"The value of a network goes up as the square of the number of users"

(Metcalf's Law)



Developed regions have greatly benefited from specialisation and agglomeration – Asia is next with China at the center

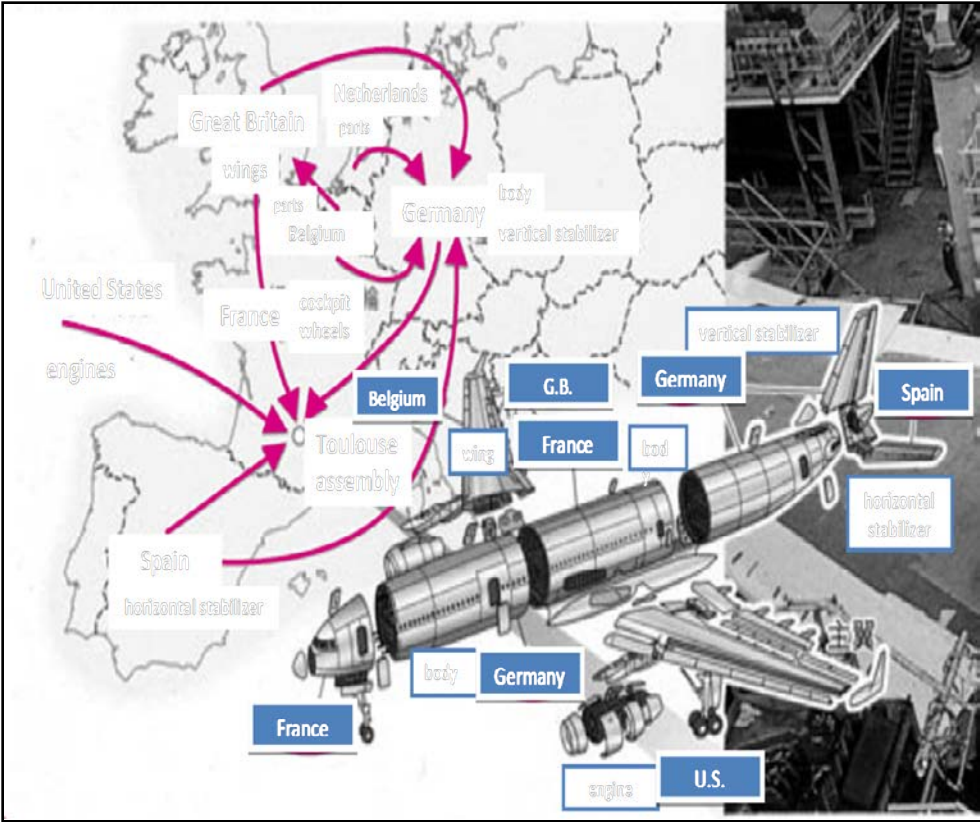
The US: Economic mass is concentrated in parts of the country (agglomeration)



Red & yellow: Strong economic activity
Blues: Mild economic activity

Source: Indermit Gill, World Bank

Europe: Airbus parts are assembled all over the region (specialisation)



**Growth outcomes:
Country's stage of development + Strategic approaches + Agglomeration effects**

Asia is also showing signs of regional specialisation and agglomeration, with China as regional hub for Asian Global Supply Chain.

Crisis has Distinctive Network Features

1. **Concentration** - Hub have “winner-take-all” effects, but the more concentrated links, the more serious the failures [TBTF]
2. **Complexity** – One global market but national and compartmentalized (silo) regulation.
3. **System-wide nature** – need holistic view, not partial and institution-by-institution view of risks
4. **Inter-connectivity** – contagion spreads rapidly through network with unexpected small size/high impact effects [Black Swan]
5. **Inter-activity** – positive feedbacks create pro-cyclicality [Wrecking Ball effect], whereas Neo-Classical assume negative feedback that revert to equilibrium
6. **Transparency** - Crisis happened in spite of major reforms in regulation – investors, financial intermediaries, regulators and policy makers did not understand toxicity of financial engineering
7. **Incentive Structure** – management compensation, moral hazard and lack of incentives for anti-cyclical enforcement action all worked towards risk-taking
8. **Shared Governance** - Without One Global Financial Central Bank/Financial Regulator, how do we share responsibility and risks between home and host countries?

1934 New Deal invented three simple but crucial “coarse” rules that limited network crisis:

- **Net Capital Rule - risk limits**
 - **Glass-Steagall - firewalls**
 - **Disclosure - greater transparency through SEC as conduct regulator.**
- **Unfortunately, since 1990s, these rules were eroded through exemptions, use of models or abolished (Glass Steagall). The global network was then vulnerable to inter-connected and interactive shocks that collapsed through failure of hubs like Lehmans. China and India were shielded from direct impact by exchange controls and lag in financial development.**

1. Through Concentration and Agglomeration of Financial Institutions, we have roughly 40-50 Large Complex Financial Institutions that are Too Big to Fail, but some failed.

- **Regulators failed to understand the inter-connections between these LCFIs, between the investment banks, AIG, Fannie Mae, hedge funds etc. that are linked by product, distribution channels and common platforms**
- **Consequently, the failure of one hub (Lehmans) almost led to a chain reaction in failure of all its counter-parties. AIG failure would have been catastrophic because it was the largest insurer, largest aircraft leasing company and insurer on other side of CDS trades, providing capital support to many banks.**

The de facto nationalization of financial institutions and leading companies means that global competition will be between state-owned enterprises and financial institutions, with real risks of crowding out private sector.

3. Complexity breeds fragility

- Complexity is the mechanism by which the agent can take advantage of the principal through increasing information asymmetry.
- We cannot solve a crisis through adding complexity, but should try to resolve it through identifying and simplifying rules and enforcing these rigorously.
- Richard Bookstaber (hedge fund risk manager) : **“if the potential for systemic risk stems from market complexity, adding layers of regulation might actually make matters worse by increasing the overall complexity of the financial system. “**
 - Richard Bookstaber, Testimony submitted to the House Financial Services Committee on Systemic Risks: Examining Regulators’ Ability to Respond to Threats to the Financial System, October 2, 2007
- The greater the complexity, the greater the fragility of the system. The simpler the system, the more robust.

3. System-wide View of Networks

- There should be coherent, appropriate oversight of all financial institutions, markets and activities, consistent with their risks.
- One global market of financial flows and yet no single central bank to conduct appropriate policy responses. No single global financial regulator
- Group of Thirty (2009), page 8:
“Gaps and weaknesses in the coverage of prudential regulation and supervision must be eliminated. All systemically significant financial institutions, regardless of type, must be subject to an appropriate degree of prudential oversight.”

4. Network Interconnectivity means Contagion can spread through Highly Complex Inter-relationships

- We do not as yet have a good understanding of how contagion can spread through not just direct connections (such as physical networks), indirect connections (such as sharing similar software) or even reputational connections.**
- Interconnectivity means that the regulator as well as the financial institution would need to have very different management information systems (MIS) that can detect connections and risks that are not apparent from traditional MIS models.**

5. Interactivity is through Positive and Negative Feedback Loops

- Markets are naturally cyclical because of herding behaviour and timing differences
- Network behaviour have positive and negative feedback loops
- “wrecking ball effect” (Soros) - when positive feedbacks get larger and larger in a chain reaction or self-reinforcing loop that ultimately damages the whole system.
- Neo-classical theory assumes that market volatility are negative feedback loops which return to equilibrium.
- **“Markets Are Self-balancing” is True Only If All Feedback are Negative.**

6. Transparency creates Opacity

- **Transparency refers to a process by which information about existing conditions, decisions and actions is made accessible, visible and understandable to market participants.**
- **There was not lack of information, but too much information that was not understandable.**
- **A game of information overload - The truth will be buried in fine print, but only if you know how to find it.**
- **We should try to make things more simple and understandable - there is a disconnect between the elite [read Wall Street] and the masses [Main Street], ending up with Main Street feeling that it has been taken for a ride.**

7. Incentives led to excess risk-taking

- **Why were there no incentives for boards of directors, auditors, rating agencies, regulators and policy makers to act anti-cyclically more effectively and forcefully?**
- **What are the incentives to ensure that policy-makers are pro-active in acting anti-cyclically?**
- **Was the market fundamentalist approach that called for minimal market intervention prone to regulatory capture?**

8. Without Global Financial Regulator, Oversight is left to Division of Labour between Home and Host Regulators

- 1. Can regulation be effective through a voluntary cooperative “memorandum of understanding”?**
- 2. What is not systemic in a mature market can be highly systemic in an emerging market.**
- 3. What was thought to be non-systemic can rapidly evolve to become highly systemic.**
- 4. The present memorandum of understanding between home and host regulators do not have sufficient legal standing or powers of mediation in the event of disagreements of views between home and host regulators.**
- 5. Without Global Bankruptcy Rules or Court, difficult to resolve failure of LCFIs on cross-border basis.**

Structure Follows Strategy

....Peter Drucker

- **Current Global Financial Structure has followed Pax Americana, G1 with dominant military and economic power**
- **Bretton Woods 1 was designed for fixed exchange rate, no global central bank and US credit in exchange for opening up markets to free trade and democracy**
- **Bretton Woods 2 was found to be unsustainable given high volatility of capital flows and asset bubbles**
- **What does G20 hope to achieve and what is proper Governance Structure to attain these objectives?**

Asian Crisis tested Bretton Woods II and Current Crisis proved it was unsustainable

- Market deregulation and Globalization created huge capital flows that led to greater market volatility, culminating in the Asian crisis of 1997/98. Overall, New York and London were major winners as global financial centres to intermediate Global flows.
- Asian determination to have “self-insurance” to avoid falling into IMF conditionality again aggravated structural global imbalance due to timing differences in demographic savings and stages of development.
- Anglo-Saxon policy-makers did not apply counter-cyclical policies to stop bubbles and contain consumption.
- Post 1998, attempt to amend Bretton Woods II was creation of G22 (later G20), reform of core fiscal, monetary, governance, regulatory and accounting standards coordinated by Financial Stability Forum, with surveillance and implementation through FSAPs and ROSCs (by IMF and World Bank).
- **The FSF structure of loose Westphalian voluntary policy coordination did not prevent the current crisis.**

History of G20

- Created in 1999 as a *deliberative* rather than *decisional* body, designed to encourage "the formation of consensus" on international issues, with a mandate to promote international financial stability.
- Broad objective to focus on translating the benefits of globalization into higher incomes and better opportunities everywhere.
- Operate within the framework of Bretton Woods institutions, and help co-ordinate the activities of other international groups and organizations, such as the Financial Stability Forum, International and Monetary Financial Committee etc,
- **Firm control of the chair is by the G7**, the two year rotational cycle, the linkage of its meetings to those of the G7 meetings at the start of each year, the presence of a deputies process to prepare for and support the meetings, its ability to call on the resources of the IMF, World Bank and outside experts, and its ability to "form working parties to examine and make recommendations on issues related to its mandate."

Global Governance is more than Financial Stability

- **Security - United Nations Security Council**
- **Food and Health - FAO and WHO**
- **Trade - WTO**
- **Finance - Bretton Wood Institutions, Development Banks, OECD, Standard Setters, BIS**
- **Environment, War, Resource Disputes, Demographics, Terrorism and Natural Disasters can all affect Financial Stability; therefore Global Financial Governance cannot be divorced from other international governance structures**
- **Michael Parkinson: The Role of G20 in the Global Financial Architecture, Lowy Institute, 2006**

Figure 14
International institutions and committees²

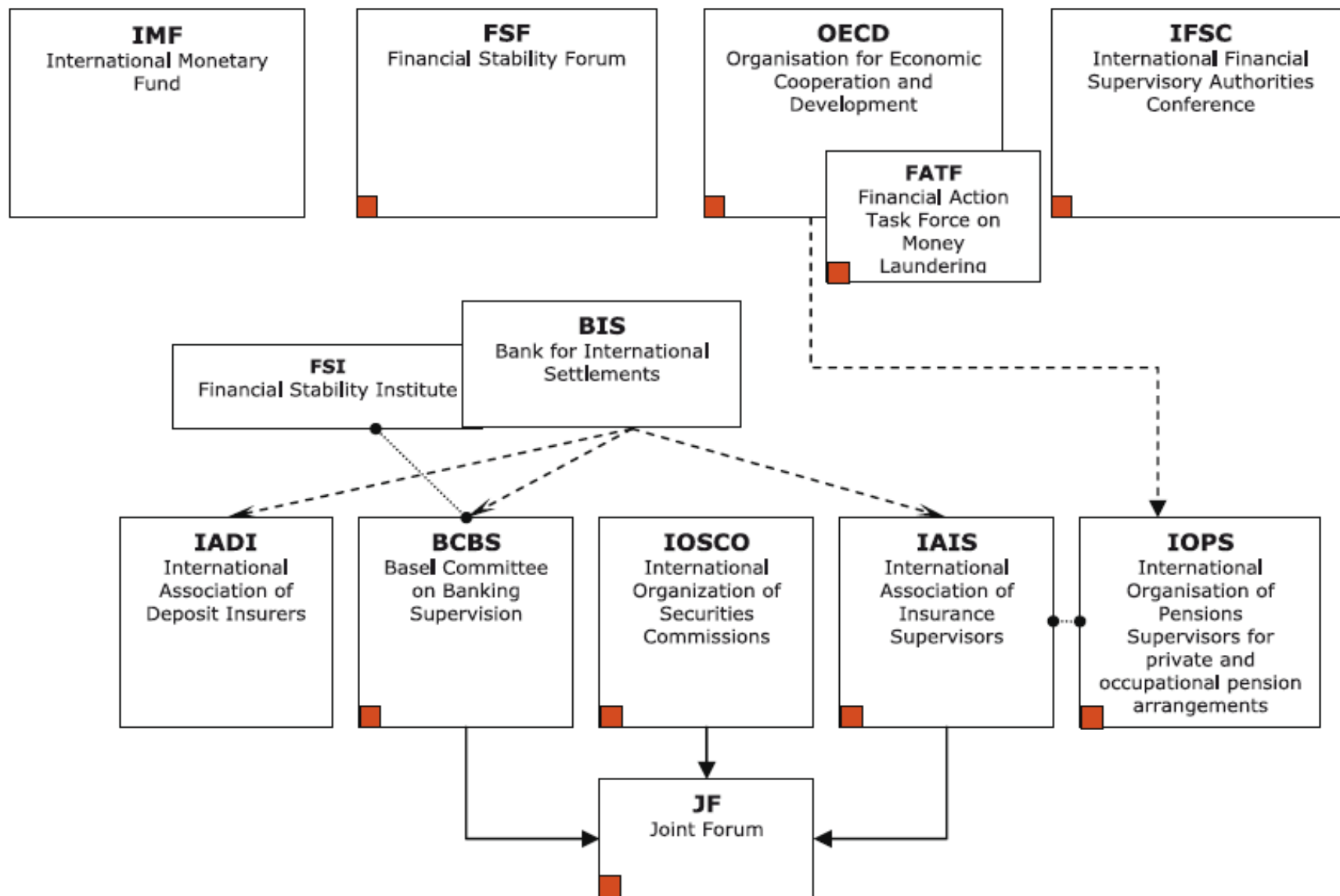
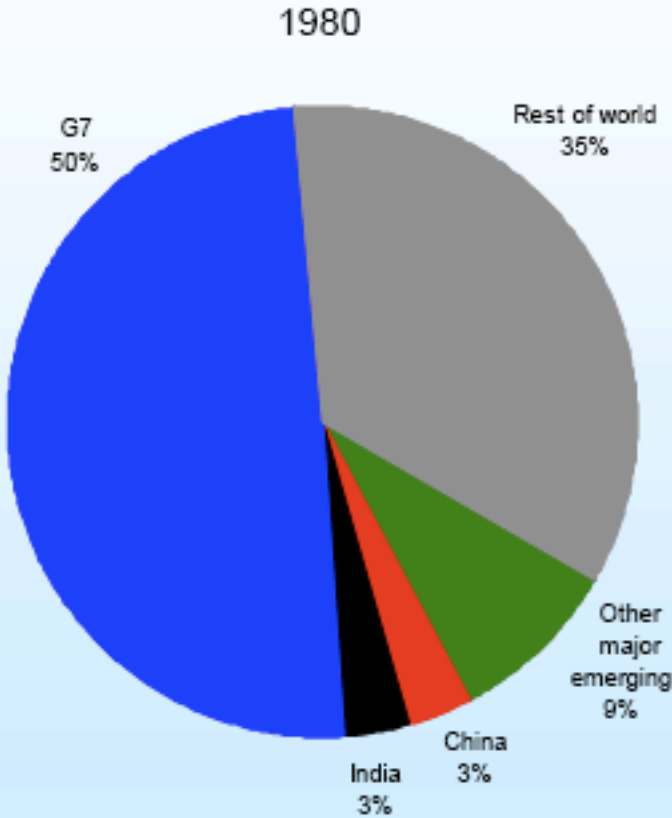
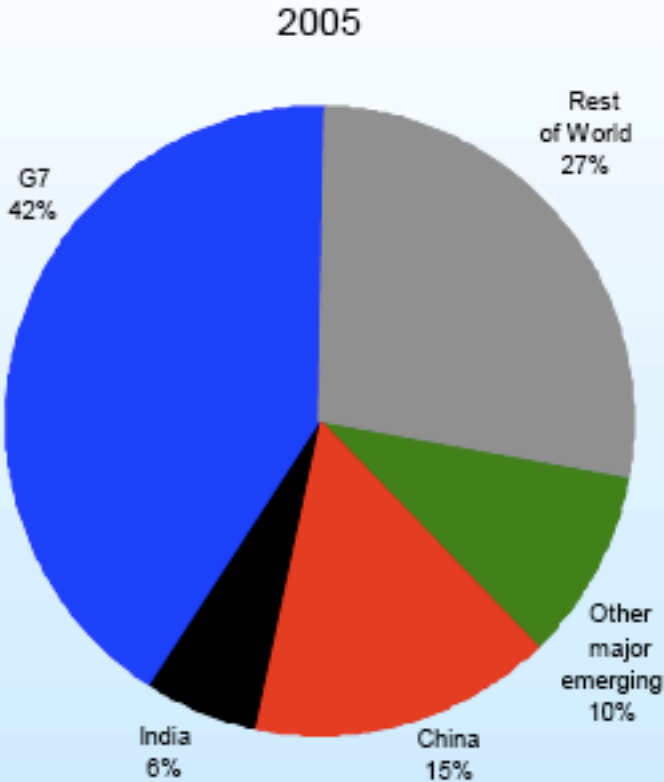


Chart 1: Changing global economy

(Purchasing power parity valuation of country GDP)



Total GDP = \$12,868.3 billion



Total GDP = \$61,027.5 billion

Source: IMF.

Chart 4: G-20 share of world GDP

Market exchange rates

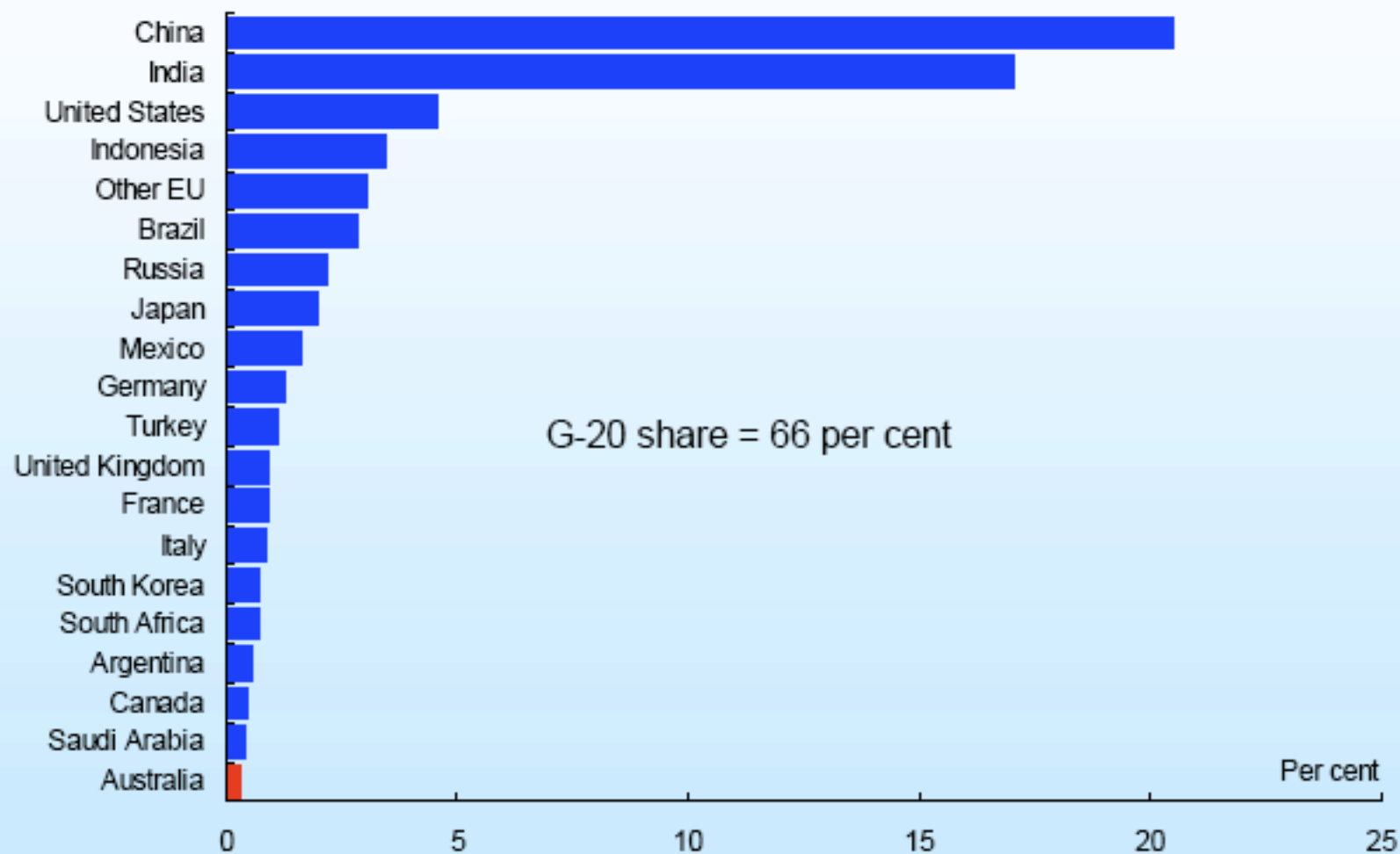


Purchasing power parity



Source: IMF.

Chart 5: G-20 share of world population



Source: United Nations.

Michael Spence: Growth Commission View

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are needed to see this picture.

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Stiglitz Commission Recommendations (UN Commission of Experts), March 2009

- 1. New Global Reserve System, with expanded SDRs**
- 2. Reform of Governance of IFIs**
- 3. A Global Economic Coordination Council**
- 4. Better and more balanced surveillance**
- 5. Reforming Central Bank policies to promote development**
- 6. Major revamp of financial market policies, especially in regulation**
- 7. Financial Innovation to mitigate risks**
- 8. Mechanisms to handle sovereign debt restructuring and cross-border investment disputes**
- 9. Completion of Development-oriented Trade Round**
- 10. More Stable and Sustained Development Finance**

Stiglitz Commission views on Regulation

1. **Creation of Financial Product Safety Commission**
2. **Comprehensive Application of Financial Regulation**
3. **Regulation of Derivatives Trading**
4. **Regulation of Credit Rating Agencies**
5. **A Global Financial Regulatory Authority; a Global Competition Authority**
6. **Host Country regulation of foreign subsidiaries**
7. **Greater enforcement of financial regulation**

G20 London Summit Declaration, April 2, 2009

- 1. Trebled resources to IMF to \$750 billion, new SDR allocation of \$250 billion, MDB \$100 billion and \$250 billion for trade financing**
- 2. Concerted fiscal expansion of \$5 trillion**
- 3. Established new Financial Stability Board, G20 plus Spain and EC**
- 4. Implimenting IMF quota and voice reforms agreed in April 2008 and complete review by January 2011**
- 5. Implement World Bank reforms agreed in October 2008**
- 6. Appointing senior leadership of IFIs in transparent, merit-based process**
- 7. Resist protectionism and promote global trade and investment**
- 8. Reaffirm commitment to Millenium Development Goals**
- 9. Provide \$50 billion to support social protection**
- 10. Reaffirm commitment to agreement at UN Climate Change conference in Copenhagen in December 2009**

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FSF becomes Financial Stability Board

- On April 2, the Financial Stability Forum (FSF) issued reports covering:
 - - Recommendations for Addressing Procyclicality in the Financial System;
 - - Principles for Sound Compensation Practices; and
 - - Principles for Cross-border Cooperation on Crisis Management.
- The Forum also published today an **update** on the implementation of the recommendations
- contained in the FSF's April 2008 *Report on Enhancing Market and Institutional Resilience*.

New Financial Stability Board

FSB consists of a Chairperson, a Steering Committee, the Plenary with member countries, SSBs and international financial institutions, and a Secretariat.

The Chair oversees the Steering Committee, the Plenary and the Secretariat.

The FSB Plenary is the decision making organ of the FSB. The Steering Committee provides operational guidance between plenary meetings to carry forward the directions of the FSB. A full-time Secretary General and an enlarged Secretariat based in Basel support the FSB.

Plenary members include the current FSF members (G20), Spain and the European Commission

Functions of Financial Stability Board

Members commit to pursue the maintenance of financial stability, maintain the openness and transparency of the financial sector, implement international financial standards (including the 12 key International Standard and Codes), and agree to undergo periodic peer reviews, using FSAP reports.

Plenary representation is at the level of central bank governor or deputy, head of the main supervisory/regulatory agency and deputy finance minister. Plenary include the chairs of the main SSBs and central bank committees, and representatives of the IMF, World Bank, the BIS and the OECD.

The FSB plenary will meet 2 times per year or as needed.

Seat assignments in the FSB Plenary reflect the size of the national economy, financial market activity and national financial stability arrangements.

Steering Committee's composition decided by FSB Chair to ensure maximum effectiveness with balanced representation

Mandates of FSB

Mandates of the FSB, to assess vulnerabilities affecting the financial system, identify and oversee action needed to address them, and promote coordination and information exchange among authorities responsible for financial stability –

In addition, the FSB will:

- 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 SSBs to ensure their work is timely, coordinated, focused on priorities and addressing gaps;**
- set guidelines for and support the establishment of supervisory colleges;**
- manage contingency planning for cross-border crisis management, particularly with respect to systemically important firms; and collaborate with the IMF to conduct Early Warning Exercises.**

Other FSB Issues

SSBs will report to the FSB on their work without prejudice to their independence.

The FSB Plenary will establish Standing Committees for Vulnerabilities Assessment;

- Supervisory and Regulatory Co-operation (including for supervisory colleges and cross-border crisis management); and**
- Implementation of Standards and Codes.**

Over time, the FSB will promote and help coordinate the alignment of international standard setting activities to address any overlaps or gaps and clarify demarcations in light of changes in national regulatory structures relating to prudential and systemic risk, market integrity and consumer protection, infrastructure, and accounting and auditing.

The FSB and IMF will intensify their collaboration, each complementing the other's role.

FSB Principles for Cross-Border Crisis Management

In financial crisis management, national authorities will, as far as possible:-

- Maintain incentives for financial institutions to behave prudently**
- Promote private sector solutions and intervene only to preserve financial stability**
- Maintain a level playing field internationally in spirit of Basel Accord**

Cooperation for Cross-Border Crisis Management

3. **Develop common support tools to manage cross-border crisis**
4. **Meet annually, coordinated by home authorities**
5. **Home authorities to keep all countries informed of arrangements**
6. **Share minimum information**
7. **Ensure firms can supply required information**
8. **Encourage firms to maintain contingency plans for wind-down**
9. **Ensure firms have robust funding plans**
10. **Seek to remove practical barriers to efficient internationally coordinated resolutions**

During crisis, national authorities commit to:

- 11. Find internationally coordinated solutions**
- 12. Share national assessments of systemic implications, using agreed framework**
- 13. Share information as early as possible**
- 14. If fully coordinated solution is not possible, discuss as promptly as possible possible national solutions**
- 15. Share plans for public communications for clarity and coordination**

Assessment of G20 Outcome: “lots of hoopla but no new, substantial remedies....Economist, 11 April 2009

- 1. Not clear where new funding will come from .. Why is Private sector funding not sought?**
- 2. Increase in SDR of \$250 billion may not add substantively to Emerging Market liquidity (only \$80 billion, as \$170 billion go to rich countries)**
- 3. IMF role increased, but with continued dominance by G7, will IMF remain “even-handed”?**
- 4. Without hard rules and Global Financial Court, who is arbiter of property right and regulatory disputes arising from LCFI failure?**
- 5. Legitimacy - proposed quota changes minimal - 5 rich countries total share 33.4% with -1.52% change; 5 [BRIC + Korea 11.62%] +0.62%. [China +0.15% to 3.81%, and US - 0.04%].**

Shortfall in funding by Emerging Markets - current account deficits and cut in capital inflows

1. De-coupling Myth - Global Crisis has cut Global trade by somewhere between US\$100-300 billion.
2. Key EME asset bubble deflation has reduced wealth substantially and EME investors have turned cautious
3. Unclear where G20 pledge of new funding of \$250 billion will come from .. Export-credit agencies of \$200 billion and World Bank \$50 billion?
4. Increase in SDR of \$250 billion may not add substantively to Emerging Market liquidity (only \$80 billion, as \$170 billion go to rich countries)
5. People's Bank currency swaps with various EMEs now RMB650 billion [US\$95 billion].

IMF - new Deputy Sheriff for G2 [US+EU]?

1. G20 has in fact reinforced Anglo-Saxon “standards-surveillance-compliance system”...Wade 2007
2. G2 will not allow IMF to be either Global Central Bank nor Lender of Last Resort... Rules vs Discretion - Taylor, 2008
3. Westphalian Principle still applies - no Global Enforcer, but FSB + IMF is “soft” surveillance plus enforcer.
4. FSB is still “soft voluntary codes”, not a Financial WTO Hard Rules, which are enforced by Treaty
5. Real Issue is WHO BEARS COST OF GLOBAL ADJUSTMENT?
6. If not IMF or IFIs, then fundamental burden sharing will still be EMEs that are victims of rich country policy mistakes + their own inadequate “self-insurance”.
7. Without adequate Legitimacy in ownership and voice representation by EME, how can IMF be even-handed in talking tough to rich and poor alike?

Principles for Reform of IMF - Boorman, 2008

- To ensure its legitimacy and credibility, the new global financial architecture, including the *governance of multilateral institutions*, should reflect the current economic realities and provide for a *larger role for the major emerging market economies*
- *Role of IMF needs to be clarified and enhanced* to allow it to become more effective in providing more timely information on the health of and issues related to global financial markets and in coordinating global actions to forestall and manage future crises
- *The IMF must have the tools and authority to address weaknesses in the economic and financial policies of all its members, including those with the largest economies and the most important financial systems in the world, and must be proactive and independent in using that authority*

Financial Network Stability - *Change with Stability and Stability with Change*

1. **Static** Financial Stability - Present Financial Business Model Broken - Restoring Old System with massive Public Funds does not solve long-term fragility issues
2. **Dynamic** Financial Stability - Patchwork repairs on the run and not solving fundamental fragilities also not sustainable
3. **Evolutionary** Financial Stability - Internet “flat” architecture appears chaotic, but more stable than highly concentrated hubs. Barabasi 2005

Need to recognize existing theory of self-regulating markets is flawed, because positive feedbacks in Global Networks from spillover effects have huge systemic implications. Similarly, Black Swan events (one in 100 year viruses) can destroy whole systems. We are in whole new intellectual territory, with obsolete tools and mindsets, and hence architecture.

9. Network dominated by Key Hubs are Darwinian; those who control will not let go

1. Current Global Financial (Business) Network is dominated by two hubs - New York and London, with Continental Europe contending.
2. The Global Financial Architecture is essentially controlled by G7, with the European grip on FSB tightened further with addition of Spain and European Commission (ECB already member).
3. Increase in quota in IMF is miniscule for emerging markets.
4. Staffing for IFIs remain dominated by G-7.
5. Emerging markets are not institutionally prepared for greater power sharing in new Global Architecture.
6. Without Global Bankruptcy Rules or Court, difficult to resolve failure of LCFIs on cross-border basis.
7. Mono-culture [in standards and philosophy] makes Global Financial System fragile through one-sided view. Diversity through competition keeps the system healthy.
8. **If IMF + FSB reinforces Mono-culture, then new Architecture may create more problems than solving them.**

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