Role of Financial Market Infrastructure in Financial System Stability & Implications for Central Bank

G Padmanabhan
Reserve Bank of India

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Presentation Outline

- ✓ FMIs and Financial Stability- Some concepts
- ✓ Why FMIs failures impact Financial Stability
- ✓ Lessons from crisis for Regulators
- ✓ Regulatory response to financial crisis
- ✓ Challenges in implementing the reform initiatives
- ✓ Some random issues

FMIs and Financial Stability- Some concepts

Financial Market Infrastructure

Multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.

- Principles for Financial Market Infrastructure

Five Categories of FMIs:

Payment Systems

Central Counterparties

Trade Repository

Central Securities Depository

Securities Settlement System

Financial Stability

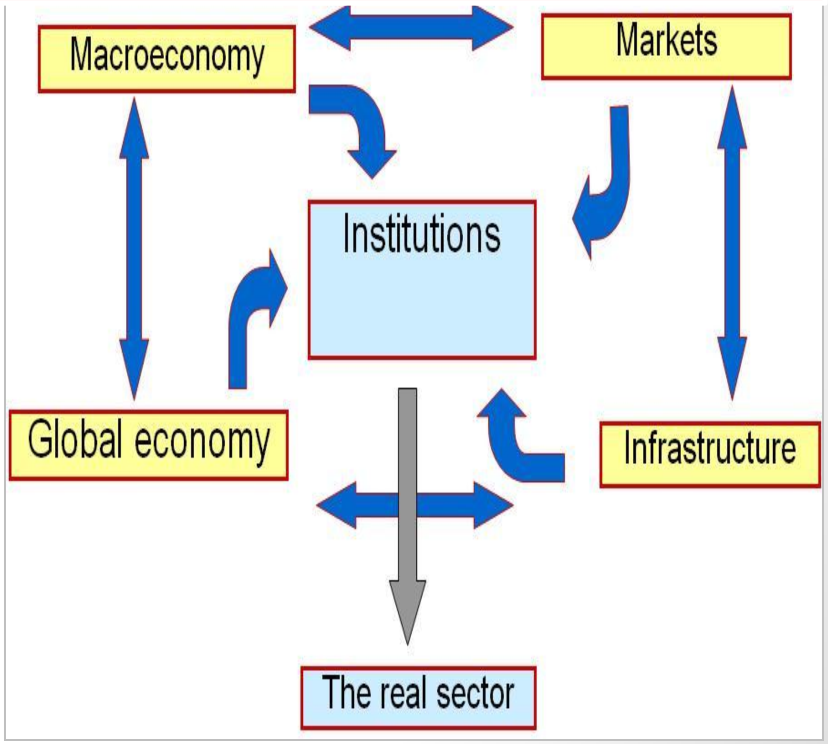
There is no universally accepted definition of financial stability. Definitions by various experts abound but most definitions are not amenable to quantification.

Financial system functioning without disruption and return to steady state after periods of volatility/vulnerability without significant impairment to longer term prospects, is generally considered an indicator of stability.

Volatilities within an acceptable/tolerable range can represent a state of financial stability.

– Financial Stability… Dimensions

- ***Markets, institutions, infrastructure***
- The macro economy
- The global economy



Factors Affecting Financial Stability

- Vulnerabilities in the real economy
- Global imbalances and rapid capital flows
- Complex financial products and rapid technological development
- Asset price bubbles
- Shadow banking system
- ***Contagion***
- ***Interconnected markets***
- Too big to fail counterparties

Well….. Virtually anything…. Anywhere!!!

How FMIs help in Financial Stability

- ✓ Build market confidence
  - ✓ CCPs shifts counterparty risks onto themselves and provide trust to continue transacting
  - ✓ Ensure settlement when transactions are due for settlement on account of their risk management practices and helps in retaining the sanity in the market.
- ✓ Minimise credit and market risk
  - ✓ Novation by CCPs
  - ✓ Complex bilateral networks collapse into simple hub and spoke
- ✓ Risk distribution
  - ✓ Achieves high netting efficiency- reduction of exposure
  - ✓ Margins and Collaterals- reduce default risks
  - ✓ Risk mututalisation- Default funds and loss allocation

How FMIs help in Financial Stability (2)

- ✓ Application of Risk management framework
  - ✓ Equitable, transparent with system wide impact
  - ✓ Risk and benefit of participation transparent to participants
  - ✓ Action to unfavourable market developments fairly known
- ✓ Address information opaqueness
  - ✓ FMIs have at any given time information on positions of market participants
  - ✓ Trade repositories help in recording and collating trade positions across members and across markets
- ✓ Economic efficiency
  - ✓ Netting benefits
  - ✓ Process automation
  - ✓ New products and service offerings

Role of FMIs during crisis

The crisis would have been much more severe had central banks not taken efforts to introduce robust payment and settlement systems, including for foreign exchange, over the two decades ahead of the crisis. The systemic impact of failure of a financial institution depends critically on the robustness of the infrastructure underpinning those markets in which it is active.

- 'Central Banking Lessons from the Crisis' (May 27, 2010)

- ✓ No materialisation of systemic risk vis-à-vis potential of risk spreading across jurisdictions and markets on account of inter-linkages
- ✓ Effective management of defaults in a non-disruptive manner
- ✓ Continued functioning of FX markets, money market
- ✓ Continued functioning of RTGS systems, CLS and CCPs

Why FMIs failures impact Financial Stability

Criticality of FMIs growing

- ✓ Volume and value of financial transactions handled by FMIs are enormous

Notional amounts outstanding (USD equivalents, in billions) on CCPs, as reported by CCPs in survey			
Asset class	**end-2010**	**end-2011**	**30 June 2012**
Credit	1,231	1,645	1,800
Commodities	25	17	13
Equity	11	2.8	2.4
FX	73	93	124
Interest rates	124,398	142,088	152,972

Source: OTC Derivative survey, FSB, BIS

Criticality of FMIs growing (2)

- ✓ Infrastructures do not work at national level anymore
  - ✓ Expanded foot prints
  - ✓ Competition and cost effectiveness
  - ✓ Regulatory initiatives promoting growth of market infrastructure
    - ✓ EU Markets in Financial Instruments Directive (known as "MiFID") in European Economic Area
- ✓ Interdependencies among FMIs
  - ✓ Multiple markets, Domestic, cross-border
- ✓ Links and interoperability
  - ✓ Multiple types of links
  - ✓ Within same categories of FMIs or among different categories

FMIs- do they concentrate risk?

"...it is an understatement that it would be a disaster if a clearing house failed. Commentators have, indeed, been emphasising that CCPs are becoming systemic. To my own way of thinking, they have already been systemic for the markets they clear for a very long time."

- Paul Tucker, Bank of England

A CCP can be thought of as the financial analogue of a dam, prevent rising water upstream from causing flooding downstream. One problem with dams is that if they fail, those they are meant to protect can suffer significant distress. Similarly CCPs can be both mitigate systemic risk and – if they become stressed – spread it

- David Murphy

Can the FMI fail?

Clearing houses have nearly failed or failed in the past

- Caisse de liquidation (Paris) in 1974
- Kuala Lumpur Commodity Clearing House in 1983
- US Equity Clearing House in 1987
- Hong Kong Futures Guarantee Corporation in 1987
- BM&F in 1999

How FMI failure impact financial stability?

- ✓ Potential for triggering systemic risk
  - ✓ FMIs are critical nodes in networks
  - ✓ Impact would be sever than participant failures
- ✓ Contagion effect due to inter-connectedness and links
- ✓ Credit losses
- ✓ Liquidity and collateral dislocation and scarcity
  - ✓ FMI failure can result in further call for capital/financial resources from from members and aggravating members positions
- ✓ Market failures on account of lack of substitutability

Moot point is……

"CCPs also concentrate risk. If not properly managed, [CCPs] can be sources of financial shocks, such as liquidity dislocations and credit losses, or a major channel through which these shocks are transmitted across domestic and international financial markets."**- Principles for Financial Market Infrastructure**

FMIs are much more complex

The consequences of a failure by a CCP could be even more severe than the failure of a large participants

Lessons from crisis for Regulators

Lessons for regulators from financial crisis

FMIs generally proved resilient to the crisis due to the efforts taken by the regulators

However.....

- ✓ There is a need for further reforms
- ✓ Past crisis is an indicator but future may be more severe
- ✓ FMIs should be capable of withstanding multiple failures
- ✓ Secured lines of liquidity are not so secured during crisis
- ✓ Infrastructure does not work at national level and hence need greater co-operation among authorities
- ✓ OTC derivative markets pose inherent risks in terms of counterparty credit risk and lack of transparency

OTC derivatives and crisis

- ✓ The notional amount outstanding in OTC derivatives stood at US$650 trillion- more than ten times annual global GDP (BIS, December 2011).
- ✓ Lack of transparency
- ✓ Under collateralisation
- ✓ Market infrastructure inadequate to sustain the volume

Regulatory response to financial crisis

G-20 Agenda

G20 recommendations - Pittsburgh communiqué of September 2009

- **Trading and Clearing:** All standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties *(CCPs)* by *end 2012* at the latest

- **Reporting:** OTC derivative contracts should be reported to trade repositories *(TRs)*

- **Non-centrally cleared contracts** should be subject to higher capital requirements

- The **FSB** and its relevant members should assess regularly progress and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse

FSB safeguards for CCPs- move to centralised clearing

- Fair and open access
- Oversight and regulation
- Recovery and resolution
- Access to emergency liquidity

Principles for Financial Market Infrastructures

- Unify and harmonize the three existing sets of standards
- Strengthen existing standards
- Inclusion of new standards
- Strengthen the “responsibilities of authorities
- Treat the principles as “requirements,” not “recommendations”
- Standard “disclosure framework” and “assessment methodology”

Recovery and resolution of FMIs

- CPSS-IOSCO consultative report published in July 2012
- Effective recovery and resolution framework for different categories of FMIs
- Aligned with FSB Key Attributes of Effective Resolution Regimes for Financial Institutions
- Further work on FMI recovery planning on-going

Other reforms impacting FMIs

Capital requirements for bank exposures to central counterparties

- Interim framework for determining capital requirements for bank exposures to CCPs as additions and amendments to “Basel II” guidelines
- Qualified CCPs are those compliant with PFMIs and exposures to such CCPs would receive preferential capital treatment in terms of risk weights
- Further clarifications provided in the FAQ on “Basel III Counterparty credit risk and exposure to Central Counterparties” published by BIS in December 2012

Margining requirements for non-centrally-cleared derivatives

- Laying out a set of high-level principles on margining practices and treatment of collateral, and proposing margin requirements for non-centrally-cleared derivatives with the objectives of reducing systemic risk and promoting central clearing
- BCBS-IOSCO consultative paper published in June 2012
- Second consultative document released in February 2013

Other reforms impacting FMIs

Data reporting and aggregation requirements

- Laying out minimum data reporting requirements and standardised formats, and the methodology and mechanism for data aggregation on a global basis

Access by authorities to trade repository data

- Guidance on the level of access by authorities to data kept in the TRs
- CPSS-IOSCO task force preparing further guidance

Legal Entity Identifier

- Establishing a scheme for the issuance of unique legal entity identifiers

Challenges in implementing the reform initiatives

Implementation challenges

- ✓ FMIs and banks are different and have diverse risk profiles
- ✓ New standards are much more complex and hence implementation would be challenging
- ✓ Changes in the legal and regulatory framework
- ✓ Set out responsibilities and objectives
- ✓ Translating the PFMIs into oversight standards
- ✓ Identifying the entities whom would be subjected to PFMIs
- ✓ Building skill sets for implementation, assessment and validation
- ✓ Developing enforcement tools
- ✓ Developing co-operative oversight

Some random issues

Addressing liquidity risk requirements

- ✓ Liquidity could be a challenge in skewed markets dominated by a few large players
- ✓ Maintaining secured lines of liquidity support from private sector may not only be difficult but may be expensive
- ✓ Alternate arrangements such as repo and financing by non-defaulting members may serve but may not be adequate
- ✓ Central bank liquidity support has moral hazard issues; could be resorted to as an emergency measure. Is it the most optimal structure?
- ✓ Could focus on participant liquidity rather than FMI liquidity be an alternative?
- ✓ Liquidity requirement in DNS system- whether transaction limits and exposure limits would help?

Increased collateralisation

- ✓ PFMIs stress on high quality collaterals with low market and low liquidity risk
- ✓ Stringent collateralisation requirements are a key element of over-the-counter (OTC) derivatives markets reform.
- ✓ ISDA estimates that an additional US$1 trillion in initial and variation margin will have to be posted in the interest rate swaps (IRS) market alone
- ✓ In many jurisdictions collaterals with low credit, liquidity, and market risks may only be limited to government securities.
- ✓ Many jurisdictions may not have depth and width in G-Sec markets, corporate bonds and other high quality collaterals
- ✓ Further issues relating to concentration, reuse and liquidation of collaterals need to be addressed.

Applicability of PFMIs to central bank operated FMIs

- ✓ Objective should be to apply PFMIs to central banks FMIs for ensuring level playing field
- ✓ However, there could be challenges in applying some of the principles in toto such as governance, credit risk, general business risk etc
- ✓ Other modes/ methods for applying PFMIs should be attempted

Thank you

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