Cyber Threats to the Financial Market Infrastructures: The Authorities' Perspective

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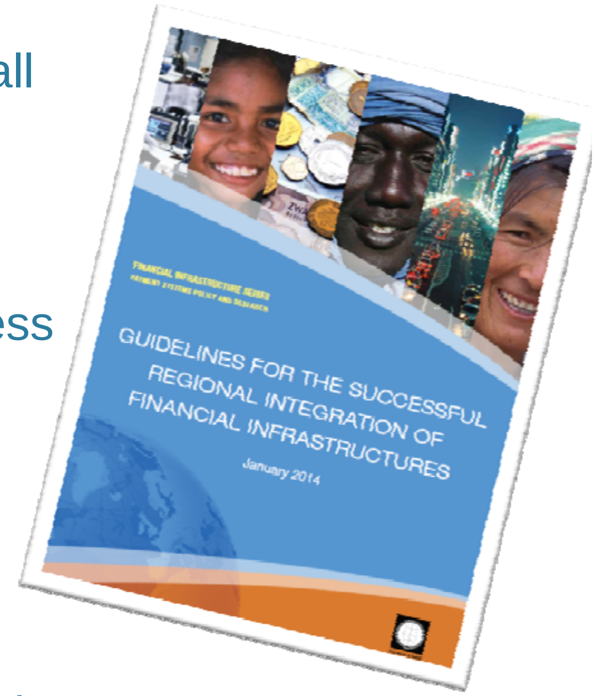
Financial Market Infrastructures / Financial Infrastructures: A Definition

- **FMI: a 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**
- **The definition of an FMI includes five key types of FMIs: payment systems, CSDs, SSSs, CCPs, and TRs.**
- **Financial Infrastructures refer additionally to other types of infrastructures, notably trading systems for securities, derivatives and foreign exchange as well as shared transaction systems for payments, such as traditional ATM and POS card payment networks and more modern on-line payment and mobile payment networks.**

Guidelines for the Successful Regional Integration of FIs

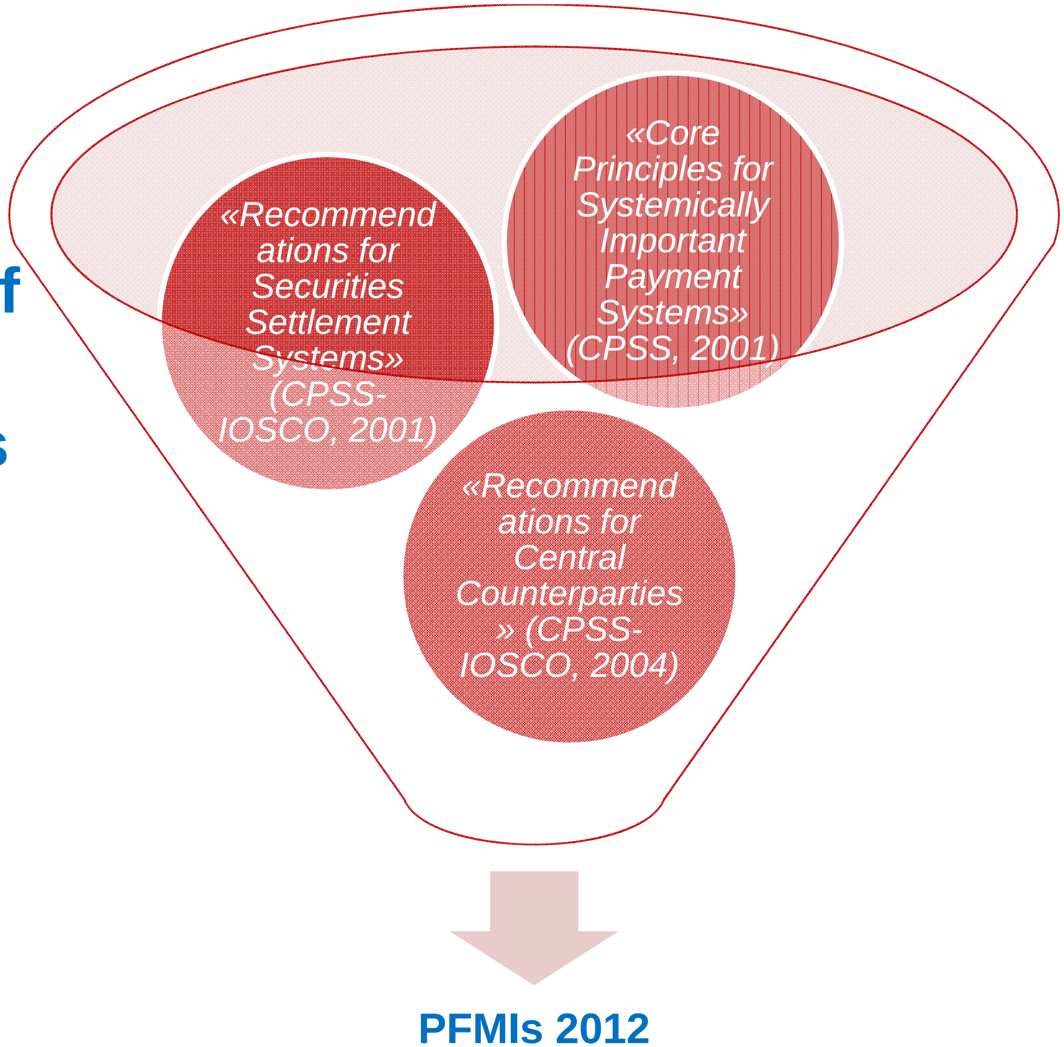
- **Enabling and Institutional Guidelines**
  Vision, purpose and scope definition; inclusiveness of all stakeholders; political support
- **Planning Guidelines**
  Governance and planning framework definition; comprehensive stocktaking; development of the business case



- **Design Guidelines**
  Definition of a feasible model; business framework; definition of cooperative and oversight frameworks
- **Implementation Guidelines**
  Establish of proper project management procedures and processes
- **Sustainability Guidelines**
  Regular consultation arrangements; keep management sound and motivated; regular self-assessment and evaluation

Raising the bar: the new CPMI-IOSCO PFMIs

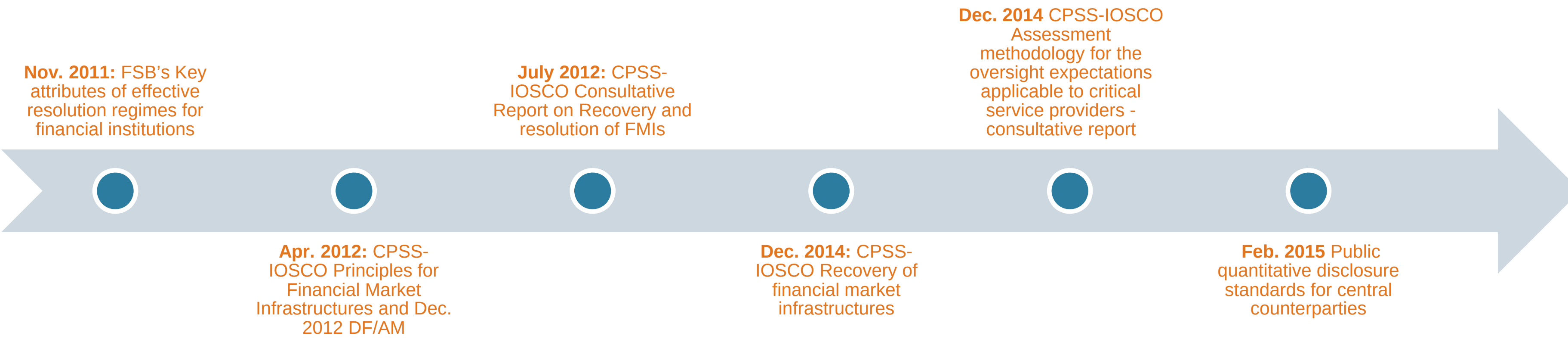
One set of new principles

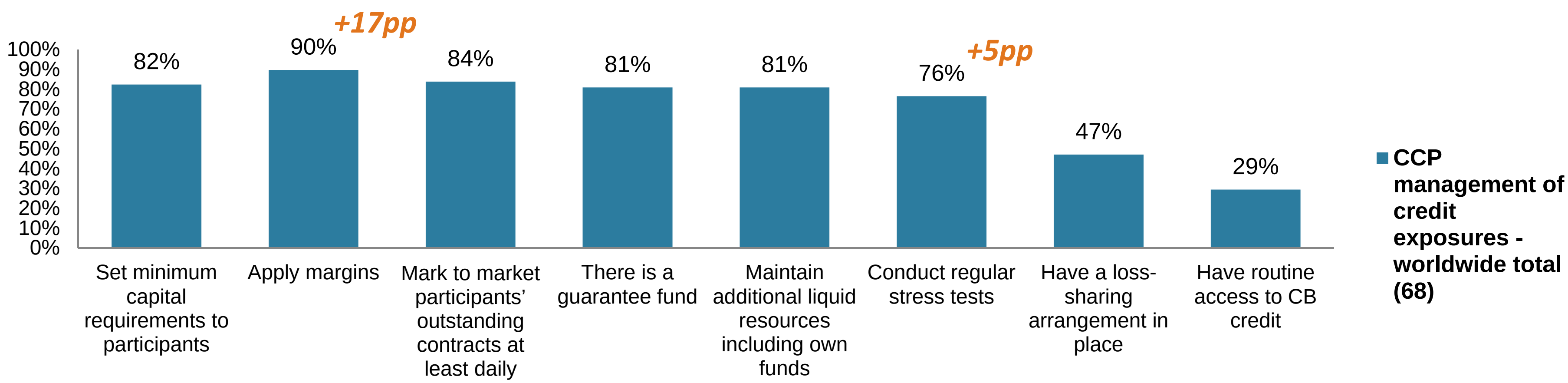


Raising the bar: key objectives of the CPMI-IOSCO effort

- **Harmonize existing standards.** The need for a single set of principles lies in the need to ensure consistent risk management amongst infrastructures that more and more are interdependent
- **Strengthen existing standards, based on**
  - Lessons from the crisis
  - Experience/gaps in applying standards
- **Ensure consistent application.**
  CPMI-IOSCO members commit to apply "to the fullest extent possible"
- **Harmonize assessment methodology and ensure consistency with "disclosure framework"**
  - Support consistent disclosures by FMIs
  - Support consistent assessments of FMIs by national authorities
  - Support consistent external assessments of FMIs/authorities (eg, FSAPs)

Critical infrastructure: "failure is not an option"

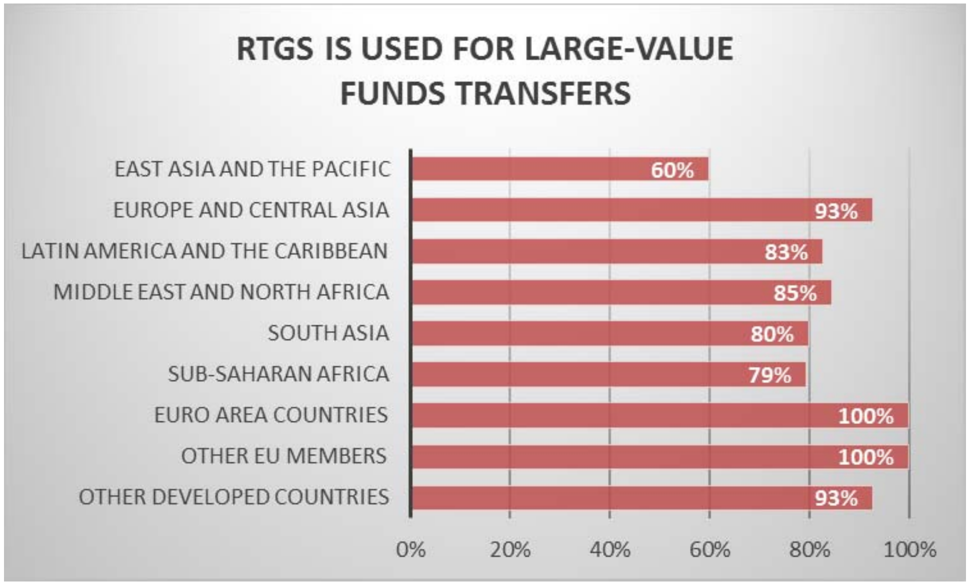




Payment and securities settlement systems worldwide largely support financial system stability

The 2008 financial crisis showed that the domestic (e.g. RTGS systems) and global (e.g. CLS Bank) payment infrastructure was able to withstand the financial storm, and was instrumental in facilitating immediate responses by authorities

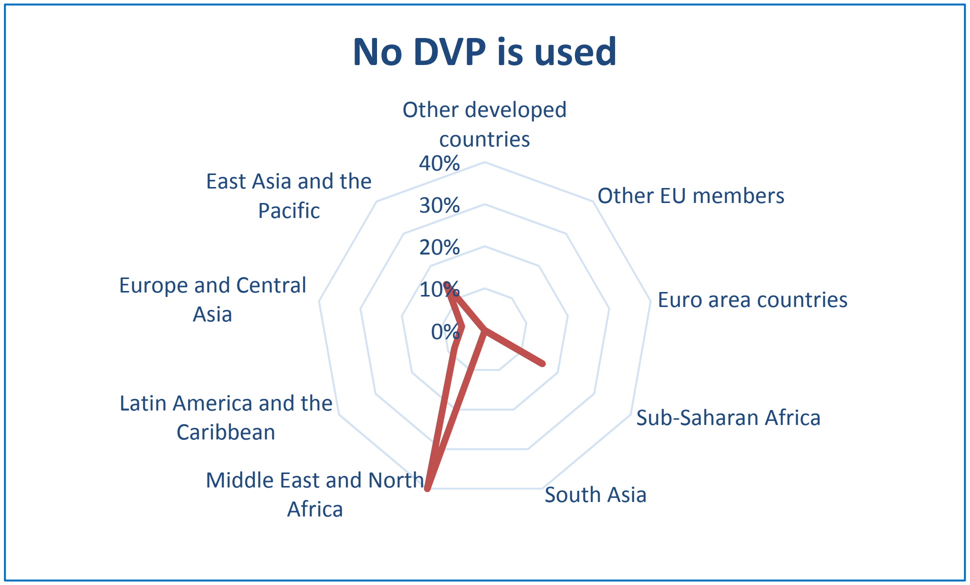
- Growing awareness of the need for sound risk management in large-value funds transfer systems has pushed the development of **REAL-TIME GROSS SETTLEMENT SYSTEMS**, a powerful mechanism for limiting systemic and settlement risk in the interbank settlement process
  - As of 2012, a total of 127 countries reported having a RTGS in place
  - Large value payments processed in a year worldwide are equivalent to 40 times the global GDP
  - In 2012, median GDP turnover was 8.4



Payment and securities settlement systems worldwide largely support financial system stability (cont.)

Securities settlement systems are increasingly interlinked to funds transfer systems and operate under **a DVP ARRANGEMENT**. These are crucial for the development of capital markets, and for the timely delivery of collateral for payments and other purposes

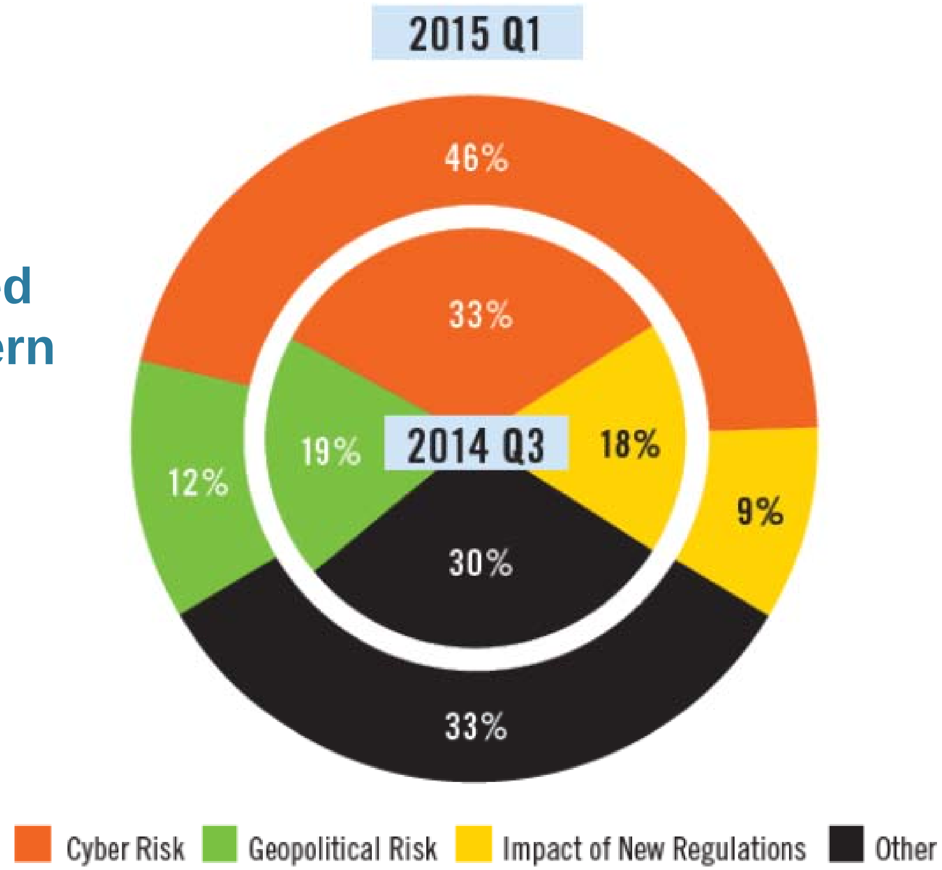
- Securities immobilization or dematerialization have been *largely* accomplished in 79% of the countries worldwide
- Settlement of cash leg in central bank money is prevalent (82% of surveyed SSSs)
- The use of DVP as a measure to reduce principal risk is widespread, with only 8% of CSDs worldwide not using a DVP model at all



Cyber Security: The next big challenge

- **Almost half of the respondents (46%) in a study among 250 financial market participants cited cyber security as their top concern**
- **80% of respondents rated it as a top 5 risk overall.**

DTCC's most recent Systemic Risk Barometer was completed in Q1 2015



Panel Session:
Cyber Threats to the Financial Market Infrastructures – The Authorities' Perspective

Moderator:

Massimo Cirasino, Practice Manager Financial Infrastructure & Access, WBG

Panelists:

- ***Cybersecurity: regulatory framework & central bank initiatives in EU***
  Helmut Wacket, Head of Oversight Division, DG Market Infrastructure and Payments, European Central Bank

- ***FMI Cyber Resilience: CPMI and CPMI-IOSCO Initiatives***
  Stuart Sperry, Deputy Associate Director Reserve Bank Operations and Payment Systems, Board of Governors of the Federal Reserve System

- ***Cyber resilience for FMIs - learn, evolve, cooperate***
  Luigi R. F. Sciusco, Markets and Payment Systems Oversight Directorate – Assistant Manager, Banca d'Italia

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