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The CPSS-IOSCO Principles for Financial Market Infrastructure

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1. Motivation

✓ Growing importance of financial market infrastructure

✓ Important FMI role to preserve financial stability

✓ Incorporate the lessons of the crisis and implement the G-20 Lisbon Agenda

✓ Address regulatory gaps and recognising growing globalisation
Interdependencies of TARGET2

ACHs, other platforms

UK CHAPS

Other 17 RTGSs

US Fedwire

JP BoJ net

71 direct links, of which with 1 LVPS, 33 ACHs, 23 SSSs (7 indirect links with CCPs)

“Link” with CLS (17 Indirect links with other RTGS systems)
Too interconnected: e.g. links due to Lehman participation
II. The Principles
2.1. Objectives of CPSS-IOSCO work

✓ **Harmonize** existing standards for different types of FMIs

✓ **Strengthen** existing standards, based on
  ✓ Lessons from the crisis
  ✓ Experience/gaps in applying standards

✓ **Ensure** **consistent application** (through Responsibilities, Disclosure Framework an Assessment methodology)
### 2.2. Overview of the principles

<table>
<thead>
<tr>
<th>General organization</th>
<th>Credit and liquidity risk management</th>
<th>Settlement</th>
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</thead>
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<tr>
<td>1. Legal basis</td>
<td>4. Credit risk</td>
<td>8. Settlement finality</td>
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<tr>
<td></td>
<td>7. Liquidity risk</td>
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<table>
<thead>
<tr>
<th>CSDs and exchange-of-value settlement systems</th>
<th>Default management</th>
<th>General business and operational risk management</th>
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<tr>
<td>11. CSDs</td>
<td>13. Participant-default rules and procedures</td>
<td>15. General business risk</td>
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<td>17. Operational risk</td>
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<table>
<thead>
<tr>
<th>Access</th>
<th>Efficiency</th>
<th>Transparency</th>
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<tbody>
<tr>
<td>20. FMI links</td>
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## 2.3. Raising the bar on financial risk management

<table>
<thead>
<tr>
<th>Issue</th>
<th>Purpose</th>
<th>Problems during Lehman crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit exposures</strong></td>
<td>Reference to exposure of all affiliated entities of same group</td>
<td>Financial losses.</td>
</tr>
<tr>
<td></td>
<td>Greater emphasis on crisis scenarios: cover 2 for internationally active</td>
<td>Sequential defaults of more than one large participants.</td>
</tr>
<tr>
<td></td>
<td>or high-risk CCPs; otherwise 1+</td>
<td>Proven ineffectiveness of certain tools (e.g. uncomm. uncoll. credit lines) in</td>
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<tr>
<td></td>
<td>100 % collateralisation of all current exposures</td>
<td>certain crisis scenario,</td>
</tr>
<tr>
<td><strong>Liquidity exposure</strong></td>
<td>Current exposures also include intraday exposures</td>
<td>Ineffectiveness of certain tools special relevant for liquidity.</td>
</tr>
<tr>
<td></td>
<td>Reference to different sources of liquidity risk</td>
<td>Critical role of settlement/agent liquidity providers. (e.g. CLS)</td>
</tr>
<tr>
<td><strong>Collateral</strong></td>
<td>Avoid concentration risk; procyclicality wrong-way risks; higher quality</td>
<td>Quality of collateral affects the size of losses. Procyclicality and wrong-way risks increased</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the costs for funding.</td>
</tr>
<tr>
<td><strong>Additional tools</strong></td>
<td>Clear rules indicating how allocating remaining uncovered losses to non-</td>
<td>See above</td>
</tr>
<tr>
<td></td>
<td>defaulting participants (e.g. a survivor-pay arrangement)</td>
<td></td>
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</tbody>
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2.4. Credit risk: previous requirements

- All FMIs: current exposure (CE)
  - Cover largest CE to a single participant

- CCPs: potential future exposure (PFE)
  - Cover largest PFE to a single participant
    - With 99% confidence, via margin
    - In extreme but plausible conditions, via default fund
2.5. Credit risk: raising the bar

- **All FMIs:** Requirements based on “participant family,” not single legal entity (i.e. consolidated exposure to a participant and its affiliates)

- **All FMIs:** cover CE to every participant, not just single largest
  - DNS PS or SSS without settlement guarantee: “Cover 2”

- **CCPs:** PFE coverage
  - Cover every participant family with 99% confidence
  - Minimum additional resources for extreme but plausible conditions
    - “Cover 2” participant families,
      - If CCP has a more-complex risk profile or
      - If CCP is systemically important in multiple jurisdictions
    - “Cover 1” participant family for all other CCPs
2.6. Credit risk: extending the bar

• **All FMIs**
  – Rigorous collateral requirements for “coverage”
  – Rules/procedures to address/allocate uncovered credit losses (including to repay liquidity providers)
  – Rules/procedures to replenish used resources (to function even in extreme but plausible conditions)

• **CCPs**: Rigorous stress testing of financial resources
  - Daily stress testing of total available resources
  - “Feed-back” mechanism to increase resources
  - Monthly analysis of scenarios, models, parameters and assumptions
  - Annual full model validation
  - Strong governance over entire process
2.7. Liquidity risk: raising the bar

- **All FMIs: new, explicit liquidity risk principle:**
  - Maintain sufficient liquid resources in all relevant currencies…
  - to settle same-day/intraday/multiday payment obligations…
  - with a high degree of confidence under a wide range of stress scenarios

- **All FMI: Minimum requirements**
  - Cover default of the one participant family…
  - that would generate the largest liquidity obligation for the FMI…
  - in extreme but plausible market conditions

- **A CCP should “consider covering 2” participant families,**
  - If CCP has a more-complex risk profile or
  - If CCP is systemically important in multiple jurisdictions
2.8. Extending the bar: liquidity risk

- Rigorous requirements for stress testing liquidity risks
- Rigorous requirements for qualifying liquidity resources
- Cash and committed lines of credit, swaps, and repos
- Highly marketable collateral, but only if:
  - Convertible into cash…
  - with prearranged funding arrangements that are…
  - highly reliable even in extreme but plausible market conditions
- Required due diligence on liquidity providers
- Confirm each LP’s capacity to perform as required
- Confirm each LP has information to manage its risks
- Rules/procedures to address/allocate uncovered liquidity shortfalls (to avoid unwinding, revoking, or delaying same-day settlement) and to replenish used resources (to function even in extreme but plausible market conditions)
<table>
<thead>
<tr>
<th>Principle</th>
<th>Purpose</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle 3: Comprehensive risk management</strong></td>
<td>FMIs should address risks to and from other FMIs</td>
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</tr>
<tr>
<td><strong>Principle 18: Access and participation requirements</strong></td>
<td>Facilitate expanded direct access without compromising the safety of the FMI (CGFS report)</td>
<td>G-20 agenda calls for compulsory direct and indirect clearing of OTC (and exchanges) derivatives</td>
</tr>
<tr>
<td><strong>Principle 20: FMI links</strong></td>
<td>More specific and demanding requirements on different types of links</td>
<td>CCPs for OTC derivatives have been established.</td>
</tr>
<tr>
<td><strong>Responsibility E: Cooperation between authorities</strong></td>
<td>Strengthening the need for cross-border cooperation between authorities</td>
<td>Global FMIs require strengthening more cross-border cooperation between authorities</td>
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## 2.10. Revisions to prevent or facilitate recovery and resolution

<table>
<thead>
<tr>
<th>Principle</th>
<th>Amendments</th>
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</thead>
<tbody>
<tr>
<td><strong>P1 (legal risk)</strong>&lt;br&gt;P 8 (finality)**</td>
<td>• Enforceability of rules to facilitate wind-down or recovery&lt;br&gt;• Finality protected also in case of recovery or resolution</td>
</tr>
<tr>
<td><strong>P2 (governance)</strong></td>
<td>• Appropriate rules for decision making in recovery or resolution&lt;br&gt;• Incentives to support financial stability in such circumstances</td>
</tr>
<tr>
<td><strong>P3 (comprehensive risk framework)</strong></td>
<td>• Identify scenarios that could lead to it becoming unviable&lt;br&gt;• Need for effective crisis management arrangements</td>
</tr>
<tr>
<td><strong>P4 (credit risk) and P7 (liquidity risk)</strong>&lt;br&gt;P21 (Risks in links)**</td>
<td>• FMI to have rules on replenishing resources and allocating uncovered losses (or address unforeseen liquidity shortfalls)&lt;br&gt;• FMI to identify any risks from default of a linked FMI</td>
</tr>
<tr>
<td><strong>P13 (default procedures)</strong></td>
<td>• Plan to replenish resources to ensure continuity of operations after default</td>
</tr>
<tr>
<td><strong>P15 (business risk)</strong></td>
<td>• Sufficient equity capital to ensure continuity of operations as going concern</td>
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### 2.11. Issues addressed in the “new” principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>Purpose</th>
<th>Problem during Lehman crisis</th>
</tr>
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<tbody>
<tr>
<td><strong>Principle 14: Segregation and portability</strong></td>
<td>Protect indirect participants; Increased importance following mandatory clearing</td>
<td>Financial losses due to lack of appropriate segregation or inability to properly move positions</td>
</tr>
<tr>
<td><strong>Several principles</strong></td>
<td>New requirements for trade repositories and new transparency requirements (including disclosure framework)</td>
<td>Lack of transparency on (Lehman) trades</td>
</tr>
<tr>
<td><strong>Principle 19: Tiered participation</strong></td>
<td>Identify and address any risks that the FMI may face from indirect participants</td>
<td>Lehmann was indirect participant in many FMIs</td>
</tr>
<tr>
<td><strong>Principle 15: Business risk</strong></td>
<td>Recognise the fact that FMIs may fail and create systemic disruptions not only as a result of member default, but also as a result of non-default related risks</td>
<td>Lack of clear resolution regime for FMIs and increasing concerns that FMI may fail or need central bank assistance</td>
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</table>
III. The Responsibilities
3.1. Potential concerns to address (I)

✓ In general, what role does the public sector have for FMIs? More specifically, who should do what and how?

✓ What is the purpose of the “Responsibilities”? What is their status and relevance for authorities?

✓ How do the Responsibilities relate to (domestic) statutory and legal obligations that authorities may have? How do they relate to other guiding documents that exist for CPSS and IOSCO?

✓ How to identify relevant authorities that are responsible for a particular FMI, especially in case of globally acting FMIs (e.g. on the basis of FMI’s location, participants, currency)?
3.1. Potential concerns to address (II)

✓ How to ensure that infrastructure with the same regular risk profile are subject to consistent requirements and are consequently addressing their risks consistently? And how to ensure that different risk models lead to the same level of resilience? More specifically, who should do what and how?

✓ How to address issues coming from interdependencies?

✓ What exactly is the role of each authority? What specifically of central banks?

✓ What form should cooperation take: information sharing, notification, consultation, discussions, joint assessment etc.?
3.2. What is new?

- For the first time, all aspects relevant for all types of authorities and all types of FMIs are comprehensively covered in a single document.
- Formal commitment by authorities to adopt and apply the PFMIs.
- Commitment to consistent application of PFMIs (need for implementation monitoring).
- Commitment towards equal treatment of central-bank FMIs and private-sector FMIs.
- Guidance on choice of framework for regulation, supervision, and oversight (legislation, statutory framework, or versus less formal arrangements).
- Greater emphasis on the need for public disclosure of policies and the importance of consultations to this end.
- Authorities are explicitly expected to promote both safety and efficiency of FMIs.
- Much greater emphasis and detail on cooperation, while recognising the need for some flexibility.
- Specific reference to the role of the central bank of issue (new for CSD and CCPs).
3.3. Cooperation with other authorities: Responsibility E (I)

- Need for effective co-operation, under any circumstances: (i) in normal times, (ii) in crisis situation, (iii) for recovery and resolution

- Obligation to notify other authorities of cross-border or multicurrency FMIs

- Variety of different forms of co-operation: form, degree, formalisation, and intensity to be tailored to the specific case and circumstances (not easy)

- Cooperation must not dilute responsibilities: at least one authority should accept ultimate responsibility (typically, but not necessarily, the authority with primary responsibility in the FMI’s home jurisdiction)

- Need for co-operation in assessing FMIs against the Principles by means of information sharing, consultations, and discussions
For assessing payment, settlement, and liquidity arrangements, the authority with primary responsibility needs to consider the views of the central bank of issue (and vice versa)

Advance notification to be given to any relevant authorities regarding regulatory changes or adverse events

Need for coordination to ensure timely access to data in TRs

Ultimately, authorities may decide to discourage the use of an FMI

Co-operative arrangements in no way prejudice an authority’s legal or statutory powers

Responsibility E offers general guidance on how to design frameworks for co-operation; specific features of each framework need to be tailored to the individual FMI and specific purpose of co-operation!
IV. Risk management, recovery and resolution
(work in progress)
4.1. FMIs are different from banks

✓ Different functions and need for continuity of critical services;

✓ Different risk profiles

✓ Different balance sheets

✓ Different structure (participation, links, etc)
4.2. FMIs are different from each other

a) **FMIs that do not take on credit risk**
   - Recovery: as losses would typically result from general business risk, focus on capital resources to address business risk
   - Resolution: transfer of operations to third parties if available or need to create a bridge institution

b) **FMIs that take on credit risk**
   - Recovery: need for FMI’s loss allocation rules and (in case of CCPs) re-establishment of matched book
   - Resolution: need for statutory loss allocation rules or alternatively transfer of operations to third parties or bridge institution
<table>
<thead>
<tr>
<th>Level of activity</th>
<th>Tool</th>
<th>Responsibility</th>
<th>Relevant rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observance of PFMI</td>
<td>Risk management</td>
<td>FMI (overseen by authorities) and overseers</td>
<td>All PFMIIs</td>
</tr>
<tr>
<td>Recovery</td>
<td>Recapitalisation, loss sharing rules</td>
<td>FMI and overseers</td>
<td>Mainly Principles 1, 4, 7, and 15</td>
</tr>
<tr>
<td>Resolution</td>
<td>Resolution tools (including loss allocation; transfer of services)</td>
<td>Resolution authorities (in co-operation with overseers)</td>
<td>Key Attributes (Insolvency Legislation)</td>
</tr>
</tbody>
</table>
## 4.4. Inventory of recovery tools

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Tools</th>
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</table>
| Allocate uncovered losses from a participant default | - Cash calls on participants ("assessment power")  
- Variation margin haircutting by CCPs  
- Initial margin haircutting |
| Address uncovered liquidity shortfalls | - Obtain liquidity from third-party institutions  
- Obtain liquidity from non-defaulting participants |
| Replenish financial resources | - Cash calls on participants ("assessment power") |
| Allocate losses not related to participant default (e.g. Investment risk, operational risk, custody risk) | - Recapitalisation  
- Explicit insurance (e.g. from a third party) or indemnity agreements (e.g. from a parent, owners or participants) |
| (for CCPs) Re-establish a matched book | - Incentivise acceptance of unmatched contracts  
- Forced allocation of contracts  
- Contract termination: tear up  
- Contractual versus voluntary tools to achieve a matched book |
International nature of many FMIs means that several authorities may have responsibilities for a particular FMI, including for recovery and resolution.

The FSB’s Key Attributes of Effective Resolution Regimes for Financial Institutions specify cooperation and coordination requirements for legal framework conditions (KA 7), Crisis Management Groups (KA 8), and institution-specific cooperation agreements (KA 9).

Responsibility E is compatible with all of these requirements: cooperative oversight arrangement under Responsibility E enable effective cooperation in normal times, in times of crisis, and for recovery and resolution.

Leveraging the arrangements under Responsibility E will ensure consistency across recovery and resolution plans, facilitate cross-border communication, and facilitate mutual recognition of resolution actions in different jurisdictions.

Responsibility E, as supplemented to meet Key Attributes, helps to avoid any duplicative and inconsistent arrangements, thus lowering regulatory burden and avoiding gaps recovery and resolution plans!
Thanks for your attention!