Critical Infrastructure Protection for the Dutch financial sector

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Leon Strous

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- Payments and Securities infrastructure
- Financial Core Infrastructure (FCI)
- Organisational structures and measures
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- Conclusion
Authors

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Safeguarding the stability of the financial system and the institutions that are part of it, by

- Contributing to monetary policy of Eurosystem
- Supervising financial institutions
- Promoting the smooth functioning of the payment system
Critical Infrastructure Protection, historical overview (the Netherlands)

- Started in 2001 after 911, focus on Anti-Terrorism.
  - Government driven
- Report in 2005: CIP takes shape
  - CIP framework defined;
  - main products and services identified;
  - main vulnerabilities and risks identified
Critical Infrastructure Protection, historical overview (the Netherlands)

- 2005 – 2012: Focus changed to all-hazard approach, public-private partnerships organised per sector, measures in place.

- 2012: CIP cycle in place, refinement of structures and measures
Definitions

Critical Infrastructure → Critical Sectors → Critical Products Services → FCI → Critical Points
Overview payments and securities infrastructure (non-cash)

Legend:
- payment order
- order flow info
- owner relation
- payment products
- goods/services
- owner payment product relation

* Owner Interbank Payment Products

* Debtor’s Commercial Bank

Central Securities Depository

Stock Exchange

Central Counterparty

National Central Bank

Automatic Clearing Houses

* Creditors Commercial Bank

Electronic Money Institutions

Payee

Payer

Restricted
Main figures

Financial services in the Netherlands (population 17 million)

- GDP NL: 603.5 EUR billion in 2011
- 257,000 people employed
- Gross added value ~ 38 EUR billion
- Banks: balance sheet total ~ 2.500 EUR billion (okt 2011)
# Main figures

<table>
<thead>
<tr>
<th>Netherlands</th>
<th>2011 # trx</th>
<th>M Eur</th>
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</thead>
<tbody>
<tr>
<td><strong>Retail payments</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote payments</td>
<td>3,011,369,609</td>
<td>5,632,554</td>
</tr>
<tr>
<td>POS</td>
<td>2,495,679,600</td>
<td>87,381</td>
</tr>
<tr>
<td>Cash</td>
<td>466,936</td>
<td>95,314</td>
</tr>
<tr>
<td><strong>Wholesale payments to/from NL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TARGET2 NL) definitie oversight</td>
<td>8,329,575</td>
<td>75,003,345</td>
</tr>
<tr>
<td><strong>Securities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cashmarket - Euronext Amsterdam</td>
<td>51,977,420</td>
<td>435,097</td>
</tr>
<tr>
<td>Stock</td>
<td>48,951,207</td>
<td>399,567</td>
</tr>
<tr>
<td>Bonds</td>
<td>264,399</td>
<td>5,260</td>
</tr>
<tr>
<td>Other</td>
<td>2,761,814</td>
<td>30,270</td>
</tr>
<tr>
<td>Derivatenhandel - NYSE Liffe Amsterdam</td>
<td>15,579,407</td>
<td>1,752,861</td>
</tr>
<tr>
<td>Options</td>
<td>8,242,701</td>
<td>936,829</td>
</tr>
<tr>
<td>Futures</td>
<td>7,336,706</td>
<td>816,032</td>
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</table>
Financial Core Infrastructure (FCI)

The FCI is:

- A list of financial institutions and financial market infrastructures that form the critical parts of the Dutch payment and securities infrastructure

- Compiled by DNB in collaboration with Ministry of Finance and Authority for Financial Markets (AFM)
Financial Core Infrastructure (FCI)

In order to be part of the FCI the following qualitative criteria have to be met:

- Disruption leads to large financial losses for the economy or leads to large civil unrest;
- The institution is directly regulated in the Netherlands.
Institutions are added to the list if they are part of the list of institutions, which in decreasing size form cumulative 80% of the total transaction volume or value. This rule is separately applied to clearing and settlement institutions and their participants per domain (retail payments, wholesale payments and securities)
Consequences of being part of the FCI:

- DNB Business Continuity Assessment Framework;
- Part of sector crisis management organisation;
- Dutch terrorism alert system;
- Business Continuity Platform Critical Infrastructure Protection
- Participation in market wide simulation exercises
Main themes:

- Business Continuity and Disaster Recovery
- Anti-Terrorism and physical security
- Crisis management
- ICT/Cyber security

Out of scope: financial issues and crises (e.g. Sovereign debt crisis)
## Organisational Structures and Measures

<table>
<thead>
<tr>
<th>Public</th>
<th>Organisational Structures: Preventative Regulators</th>
<th>Measures: Preventative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Prudential Supervision</td>
<td>- Business Continuity Assessment Framework</td>
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<td></td>
<td>- Oversight</td>
<td>- Supervisory standards</td>
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<tr>
<td></td>
<td>- Policy Makers</td>
<td>- Policy reports</td>
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<tr>
<td></td>
<td>- Central Bank</td>
<td>- Threat and vulnerability analysis</td>
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<tr>
<td></td>
<td>- Ministry of Finance</td>
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<td></td>
<td>- Intelligence agencies</td>
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</table>
## Organisational Structures and Measures

<table>
<thead>
<tr>
<th>Public-Private</th>
<th>Preventative</th>
<th>Preventative</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• Business Continuity Platform</td>
<td>• Exchange of information</td>
</tr>
<tr>
<td></td>
<td>• Working Group Alerting Terrorism</td>
<td>• Best practices vendor requirements</td>
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<td></td>
<td>• Project based Cross Sector Collaboration</td>
<td>• Consultation on standards</td>
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<td></td>
<td>• FI-ISAC</td>
<td>• Anti-terrorism measures</td>
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<tr>
<td></td>
<td>Corrective / Responsive</td>
<td>• Alerting Terrorism System</td>
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<tr>
<td></td>
<td>• Sector Crisis Management</td>
<td>• Cross sector exercise Financial Sector – Telecommunication Sector</td>
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<tr>
<td></td>
<td></td>
<td>• Tri-annual Market Wide Simulation Exercise</td>
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<tr>
<td></td>
<td></td>
<td>• Cross sector exercise Financial Sector – Telecommunication Sector*</td>
</tr>
<tr>
<td>Private</td>
<td>None</td>
<td>Corrective/Responsive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Crisis management decision making and communication and Disaster Recovery Planning/Toolkit</td>
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<tr>
<td></td>
<td></td>
<td>None</td>
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*Cross sector exercise Financial Sector – Telecommunication Sector*
e.g. sector crisis management
Basic model for CIP

Define
Determine scope, vulnerabilities and major risks
Project based org. structure

Organize
Design and implement org. Structures
Main themes:
Business Continuity
Anti-Terrorism
ICT/Cyber
Crisis management
Project based org. structure

Determine protection level

Prioritize

CIP Organisational structures

Implement

Project based org. structure
Conclusion

- CIP for the Dutch financial sector is based upon a pragmatic approach and is considered to be front running in Europe.

Main question to be addressed:

- Is our approach sound and complete and how could we assess our approach
Questions?

Thank you for your attention!

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