Non-banks and Risk in Retail Payments

Simonetta Rosati
European Central Bank

Stuart E. Weiner
Federal Reserve Bank of Kansas City

ECB-Bank of England Conference on Payments and Monetary and Financial Stability
Frankfurt, 13 November 2007
Overview

1. Who’s processing the payments?
2. Non-banks along the payments processing chain
3. Risks in retail payments
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
1. Who’s processing the payments? (1/5)

- Banks
- Money transfer providers
- Card companies
- Mobile phone companies
- Internet / IT providers
- Data processors
- Security vendors
- E-money licensed institutions
- Other (e.g. public administration)
- Network managers
- .....?
A definition of non-banks in payments

Any enterprise that is not a “bank” (a fully licensed credit institution) and which provides, primarily by way of electronic means, “payment services” to its customers.
1. Who’s processing the payments? (3/5)

1. Banks
2. ELMIs (E-money licensed institutions)
3. Other non-bank financial institutions (not licensed as credit institutions), e.g. depending on the national legal framework: money remittance service providers, credit card companies, etc.
4. Vendors and/or outsourcers (e.g. data processors, network managers, security vendors)
5. Other institutions (e.g. mobile phone companies/telecoms, large retailers, …)
6. Loyalty schemes, bonus-point programs redeemable in wide partnership programs, other entities, only if offering "payment-like services"
7. Public administration/public institutions
1. Who’s processing the payments? (4/5)

Front end providers: serve end-users (payers/payees)

e.g. issuing/acquiring, internet P2P payment providers, money transfer providers, …
1. Who’s processing the payments? (5/5)

**Back end providers:** serve other payments service providers

e.g. data processors, processors of bank transactions or cards payments,…
Overview

1. Who’s processing the payments?
2. **Non-banks along the payments processing chain**
3. Risks in retail payments
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
2. Non-banks along the payments processing chain (1/7)

Payment instruments considered

1. Electronic Cheques
2. Credit Transfers
3. Direct Debits
4. Payment Cards (credit/debit)
5. E-money and other pre-funded/stored-value instruments (including internet P2P)
2. Non-banks along the payments processing chain (2/7)

23 Broad Activities in retail payments processing

- **Pre-Transaction**: Customer Acquisition, Provision of Front-end Payment Infrastructure
- **During-Transaction Stage 1**: Merchant Communication Connection/Fraud & Risk Mgmt Services, Transaction Authorization/Fraud & Risk Mgmt Services
- **During-Transaction Stage 2**: Clearing, Settlement
- **Post-Transaction**: Statement Provision, Reconciliation Retrieval Analysis & Reporting
2. Non-banks along the payments processing chain (3/7)

• **EU coverage: 15 countries**
  – 10 from the Euro area (Austria, Belgium, Finland, France, Germany, Greece, Italy, the Netherlands, Portugal, and Slovenia) and
  – 5 from non-Euro member states (Bulgaria, Cyprus, Czech Republic, Latvia, and Lithuania)

• **Caveat:** data for EU are not fully comparable, therefore results are to be considered preliminary and partial
Non-banks’ role is increasingly important and visible throughout the whole processing chain.

Except settlement, which remains a bank activity...

... with some exceptions in Europe.
2. Non-banks along the payments processing chain: cards (5/7)

<table>
<thead>
<tr>
<th></th>
<th>Pre-transaction</th>
<th>Merchant communication</th>
<th>Preparation Clearing and Settlement</th>
<th>Post-transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>10 11 12 13 14 15 16</td>
<td>17 18 19 20 21 22 23 24 25 26 27</td>
<td>19 20 21 22 23 24</td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CZ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* several non-bank companies are bank-owned in Germany

- irrelevant
- prominent
- not applicable
- not able to judge
2. Non-banks along the payments processing chain: cards (6/7)

In the US, non-banks’ importance is prominent for all payment instruments.

It is fully established and visible across the whole processing chain (except the settlement stage).
In the EU, the importance of non-banks varies from country to country and seems:

- somewhat lower than in the US, but already prominent in some countries while less visible in others
- in general, prominence is higher for card payments than for other instruments in all surveyed countries

Prominence is expected to increase in the future
Focus on EU

Use of payment instruments by EU country

ECB, Blue Book, 2003 data
Relative use of payment instruments in each EU country (2003)

Focus on EU
Focus on EU

- **Shift in consumers’ payment habits and preferences**
- **Ongoing substitution of obsolete payment instruments with more efficient ones (where non-bank processors are prominent)**

Annual percentage change in number of transactions, 2003 (ECB, Blue Book)
Focus on EU

- **SEPA**, shift from national to European perspective

- **Mergers and alliances** among large national processors repositioning themselves to serve the European market

- **Payment Services Directive** harmonizing regulation for non-bank providers and opening up the market to competition and innovation at the front-end
Overview

1. Who’s processing the payments?
2. Non-banks along the payments processing chain
3. **Risks in retail payments**
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
3. Risks in retail payments (1/4)

Some risk categories have a general relevance:
• reputational risk
• legal risk
• system-wide risk

Others can be associated with specific steps and activities
• operational risk (malfuctioning, counterfeit, fraud)
• credit and liquidity risk
• settlement risk
• illicit use risk (anti-money laundering and terrorist financing)
• compliance risk
### 3. Risks in retail payments (2/4)

<table>
<thead>
<tr>
<th>Credit and Liquidity</th>
<th>during transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre-transaction</td>
</tr>
<tr>
<td></td>
<td>customer acquisition; provision of front-end infrastructure</td>
</tr>
<tr>
<td>Credit and Liquidity</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td></td>
<td>liquidity</td>
</tr>
<tr>
<td></td>
<td>Malfunctioning</td>
</tr>
<tr>
<td></td>
<td>Compliance (industry &amp; regulation)</td>
</tr>
</tbody>
</table>
3. Risks in retail payments (3/4)

<table>
<thead>
<tr>
<th>Credit and Liquidity</th>
<th>Operational</th>
<th>Compliance (industry &amp; regulation)</th>
<th>Illicit use (AML, TF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquidity</td>
<td>malfunctioning</td>
<td>data security risk &amp; fraud</td>
<td>counterfeit &amp; fraud</td>
</tr>
<tr>
<td>credit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement agent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>credit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-transaction</th>
<th>Merchant communication</th>
<th>Preparation and Settlement</th>
<th>Post-transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>customer acquisition; provision of front-end infrastructure</td>
<td>fraud &amp; risk management services, transaction authorisation</td>
<td>preparation clearing &amp; settlement</td>
<td>statements, reconciliation, retrieval, reporting</td>
</tr>
</tbody>
</table>

* several non-bank companies are bank-owned in Germany
3. Risks in retail payments (4/4)

- Importance of reputational risk minimization
- Key to safeguarding public confidence and payment instrument acceptance
- A risk review needs to go beyond the settlement stage
- Possible vulnerabilities along the whole payment process and scheme
Overview

1. Who’s processing the payments?
2. Non-banks along the payments processing chain
3. Risks in retail payments
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
4. Impact of non-banks on risks (1/5)

• **Blurring borders between payment instruments**
  – Innovative ways/application of new technology to initiate a payment using an existing payment instrument
  – Traditional payments used to transfer funds to cover/top-up internet account balances

• **Cross-channel risk: same infrastructure/providers** serving different markets or market segments

• **New payment products** (e.g. micro-payments included in the telephone bill). Often combine features of different payment instruments
4. Impact of non-banks on risks (2/5)

Some risk categories have become more prominent

- Data security, fraud, operational risks
- Possible relevance of system-wide impact due to higher concentration of processing at key players (depends on industry structure)
- Members of certain payment schemes (e.g. international four-party credit card schemes) may be exposed to settlement agent credit risk (also potential for moral hazard)
4. Impact of non-banks on risks (3/5)

Operational Risk in the new environment

- Traditional banks’ gatekeeping function to payments systems
- Modern payments networks: more complex structure, more and different players, more complex interaction, more difficult coordination
- Open access technology, dissemination of sensitive data in multiple places, not under direct control of banks
- More challenging coordination + incentives alignment (example: Payment Card Industry standards adoption)
Fraud Risk in the new environment

- Organized crime targeting payment data warehouses and networks with possible mass records compromise
- Potential vulnerability to fraud, often in steps of the payment chain outside direct control of banks
- International dimension, need for coordination
- Industry and regulatory reaction, but combating fraud is a moving target
4. Impact of non-banks on risks (5/5)

Non-banks also contribute to reducing the impact of certain risks and better controlling them

- Operational risk: following outsourcing to specialized players which concentrate state-of-the art technology, capacity, know-how and skills

- Credit and fraud risks: thanks to on-line payment data authentication and payment authorization

- Further advancement expected (e.g. biometrics technology)

There also is increased dependency of banks on non-banks for risk control and mitigation
Overview

1. Who’s processing the payments?
2. Non-banks along the payments processing chain
3. Risks in retail payments
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
First, the **Eurosystem** has clear regulatory authority over payments systems, while the **Federal Reserve’s** authority is more limited.
Second, in the EU, the Payment Services Directive will allow the provision of payment services to end users by the (new) category of non-bank payment institutions, while the US has nothing equivalent.
5. Regulatory environment (3/7)

Third, today, supervision of non-bank payment providers is less uniform across the various countries of the EU than across the US.

However, the Payment Services Directive brings harmony to treatment of non-bank payments service providers in the EU.
## EU: Back-end processing of payments

<table>
<thead>
<tr>
<th>Retail payment systems</th>
<th>Oversight by Eurosystem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructures of critical or systemic relevance</td>
<td>Oversight (e.g. SWIFT overseen by G-10 central banks)</td>
</tr>
<tr>
<td><strong>Outsourcing</strong></td>
<td></td>
</tr>
<tr>
<td>by banks</td>
<td>Banking supervision requirements</td>
</tr>
<tr>
<td>by ELMIs</td>
<td>E-money directive sets some requirements</td>
</tr>
<tr>
<td>by other front-end providers</td>
<td>Different treatment at national level (until now)</td>
</tr>
</tbody>
</table>

By “payment institutions”: harmonized by Payment Services Directive
5. Regulatory environment (5/7)

### EU: Front-end provision of payments services

<table>
<thead>
<tr>
<th>Payments instruments</th>
<th>Fall within the scope of Eurosystem oversight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>Prudential supervision (harmonized, banking directives)</td>
</tr>
<tr>
<td>ELMIs</td>
<td>Prudential supervision (harmonized, e-money directive)</td>
</tr>
<tr>
<td>By other categories of front-end providers</td>
<td>Different treatment at national level (until now)</td>
</tr>
</tbody>
</table>

By “payment institutions”: harmonized by Payment Services Directive (supervisory authorities to be designated by Member States)
5. Regulatory environment (6/7)

- In the US, responsibility for oversight of retail payments is spread out over a number of federal and state authorities.
- Bank and non-bank payments providers are treated unequally in the areas of data security and prudential supervision.
5. Regulatory environment (7/7)

- **Data security**
  - Banks and "outsourced" non-banks: Graham-Leach-Bliley Act
  - Other non-banks: Federal Trade Commission

- **Prudential supervision**
  - Non-bank processors affiliated with bank: Federal laws
  - Non-bank processors not affiliated with bank but in outsourcing arrangement with bank: TSP program
  - Not all non-bank processors are supervised
  - Industry self-regulation
Overview

1. Who’s processing the payments?
2. Non-banks along the payments processing chain
3. Risks in retail payments
4. Impact of non-banks on risks
5. Regulatory environment
6. Conclusions
Conclusions (1/3)

1. Non-banks are a driving force behind the processing of retail payments. Already prominent in the US, expected to grow further in certain European countries.

2. In Europe their role is expected to grow especially at the front-end, driven by the Payment Services Directive.

3. Another important driving force is the growth of cards payments, where non-banks’ role is key and prominent.

4. In general, risk materialization in retail payments does not have great systemic relevance.

5. But it may impact public confidence and acceptance of payment instruments.
6. Risks may originate at various steps along the processing chain, beyond the settlement stage

7. Non-banks and the technology they bring to the industry contribute to mitigating certain risks, and increasing efficiency

8. But they also shift the focus of retail payments risk towards higher dependency of banks on non-banks for risk control and mitigation

9. Some risk categories have become more prominent: these include operational, fraud, data security and settlement agent risk for certain payment schemes, and the potential for system-wide impact depending on industry structure
Conclusions (3/3)

10. Risk control has become more challenging due to multiple players involved, and more complex interaction among them.

11. There is an international dimension to possible threats.

12. Regulatory safeguards are in some cases designed assuming payments safety depends on banks (only), what might be termed “legacy regulatory structures”.

13. There is an increased need for coordination and cooperation:

- Between banks and non-banks within the industry
- Between bank and non-bank regulators/authorities
- Between industry and regulators/authorities
- At the international level
Non-banks and Risk in Retail Payment Systems

Thank you for your attention