Competing E-Purse Systems: A Standards Battle
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EXECUTIVE SUMMARY

Electronic purse systems can be an alternative for cash payments as well as PIN payments or credit card payments. For retailers as well as banks, this is attractive for reasons of cost and speed. One common system seems feasible, but in The Netherlands there have been two competing systems for several years. The common banks started with one system, but one of these banks introduced a competing system. This resulted in a costly battle. In the end, the banks decided to return to one system. This case can be seen as a battle between two standards, and standardization theory can be used to analyze it. The challenge for each stakeholder is to make a decision without knowing what the other stakeholders will do. In this case, we take the perspective of the bank that initiated the competing e-purse system.

Keywords: chipcard; e-purse; financial services industry; standardization; standards war

ORGANIZATIONAL BACKGROUND

Electronic purse systems have been introduced in many countries in the world (Committee on Payment and Settlement Systems, 2004). Success stories alternate with stories of failure (Van Hove, 2004a). Electronic purses may form an alternative for cash payments as well as small PIN or credit card payments. For payment systems, network effects apply: the more the users, the more the system’s functionality for an individual user (Farrell & Saloner, 1985; Katz & Shapiro, 1985; Leibbrandt, 2004). Therefore, one system per country is the preferred solution. However, one might argue that two or more systems within one country might be feasible as well, because competition may form an incentive for innovation.

This case tackles this issue by presenting a case of two competing banking chipcard systems in The Netherlands. Initially, Dutch banks agreed to operate one system. However, one of the banks decided to introduce their own system in cooperation with the major Dutch telecom company. After a severe battle, they ended up with one system again. The cost of this battle is estimated to be more than $100 per Dutch inhabitant.
Table 1. Rough figures of banks in The Netherlands (1995)

<table>
<thead>
<tr>
<th>Bank</th>
<th>ING Group</th>
<th>ABN-Amro</th>
<th>Rabobank</th>
<th>Other banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share on balance sheet</td>
<td>30%</td>
<td>35%</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>Market share in payment traffic</td>
<td>50%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Three companies dominate the Dutch banking scene: ABN-Amro, ING Group, and Rabobank, as seen in Table 1.

The banks cooperate in Interpay, a clearinghouse service provider mutually owned by the Dutch banks. Interpay offers, among other services, credit card, payment transfer, switching, and clearing services to its members and customers. Above all, it offers services for debit-card payments and payments by giro (national transcash service). In this cooperative body, the banks had agreed to start preparations for a multifunctional e-purse called Chipknip.

In this case, we take the perspective of the bank that introduced the competing e-purse system — Postbank. Postbank, which used to be state-owned, is the biggest bank within the ING Group of banks and insurance companies. This history still has consequences for the IT systems used — the Postbank system next to the systems of the other banks. For instance, there are two separate groups of cash dispensers, one offered by the Postbank and the second by the other banks. Formerly, many people had to receive their salary on a Postbank account, which is the reason why Postbank has maintained 50% market share in money transfer. Interpay provides connection to the proprietary Postbank payment circuit.

**SETTING THE STAGE**

In 1994, the banks decided to introduce chipcard payments for small transactions. These would form an alternative for small cash payments and also for small PIN payments. The user electronically downloads and stores money on the card in advance before spending it in a shop. So, the chipcard is like an electronic purse. The maximum amount of money was set to be NLG 500, approximately $250. Purchases can be made at so-called Point-of-Sale (POS) terminals. The card should be reloaded at reload points to be placed next to the traditional Automatic Teller Machines (ATMs). These points should be connected with the central computer systems making use of the network also used for other forms of money transfer, such as PIN payments.

In 1995, the e-purse, called Chipknip, was introduced in the medium-sized town of Arnhem. The only functionality of the card concerned payments. The technology chosen had proven its value in the neighboring country of Belgium, which has a comparable size and payment tradition. The technology appeared to function according to expectations, retailers were willing to join, and enough consumers were in favor of the card. Therefore, the banks intended to roll out an e-purse system nationwide.
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