PAYMENTS FRAUD STATISTICS

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In Payments Risk and Fraud

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The views expressed in this presentation are those of the author and do not necessarily reflect those of the Federal Reserve Bank of Kansas City or of the Federal Reserve System.
Payment Fraud Statistics

• Agenda
  – UK case study
  – Availability of fraud loss rates worldwide
  – U.S. payment fraud data

• Effective risk management requires measurement of performance
UK Case Study

• Experience with Chip-and-PIN
• Fraud loss guideposts
  – Can be of dubious value at times
  – Can usefully guide fraud reduction strategies
Fraud Loss Rate
UK-Issued Payment Cards

Loss per £100

£0.14
£0.12
£0.10
£0.08
£0.06
£0.04
£0.02
£0.00

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Includes ATM fraud losses.
UK Payment Card Fraud Losses

- £350 millions
- £250
- £300
- £150
- £100
- £50
- £0

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

- Phone, internet and mail order
- Counterfeit
- Lost or stolen cards
- Card ID theft
- Mail non-receipt

Chip and PIN deployment
International Fraud Statistics

- Typically covers cards, sometimes checks
- Domestically issued cards
- Domestic and foreign transactions
- Gross actual losses, probably for all parties
- Annual statistics (semi-annual in Australia)
- Usually report fraud by categories (counterfeit, CNP, lost/stolen, etc.)
- Australia and France provide some details on method
International Fraud Statistics

• Lead organization typically industry group (issuers, processors)
  – Exceptions: central banks in France and Singapore

• Participants include financial institutions, payment networks, payment card brands, payment processors and networks, merchants
Fraud Losses Per Value of Transactions
Domestically Issued Debit and Credit Cards

Loss per $100

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

UK
France
Australia
Singapore
Spain
Netherlands
Canada
U.S. Fraud Statistics

• Payment Fraud Production
  1. Obtain payment instrument and/or account numbers
  2. Impersonate account holder
  3. Fool the payment approval process
  4. Obtain goods or money
     - possibly transform proceeds into untraceable liquid assets
Share of Incidents and Records Exposed by Sector
Publicly Announced Data Breaches, U.S., Jan 2005 to Dec 2010

Number of Incidents
Records Compromised

Banks and Credit Unions
Nonbank payment processor
Insurance and Financial Services
Education
Retail and Commerce
Medical
Government
Other or unknown
PCI Compliance Rates and the Number of Publicly Disclosed Data Breach Incidents Among Retail & Commerce Firms

PCI Compliance Rate - Level 1 Retailers

Retail & Commerce Data Breaches
Check Fraud Statistics

• ABA: banks lost $1.024 billion on attempts valued at $11.365 billion (2009)
  – 91% of attempts (by value) were prevented
• AFP: 93% of organizations were targets of check fraud
  – 86% of these avoided financial loss
# Some Sources of U.S. Payment Fraud Statistics

<table>
<thead>
<tr>
<th>Source</th>
<th>Coverage</th>
<th>Time period</th>
<th>Payment instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association of Financial Professionals</td>
<td>Medium to large corporations</td>
<td>Annually since 2005</td>
<td>Checks, consumer debit and credit cards, corporate purchasing cards, automated clearinghouse payments, wire payments</td>
</tr>
<tr>
<td>American Bankers Association</td>
<td>Small to large banks</td>
<td>Periodically since 1991</td>
<td>Checks and debit cards</td>
</tr>
<tr>
<td>CyberSource</td>
<td>Online merchants</td>
<td>Annually since 2000</td>
<td>Primarily debit and credit cards</td>
</tr>
<tr>
<td>Javelin Strategy &amp; Research</td>
<td>Consumers</td>
<td>Annually since 2004</td>
<td>Checks, debit and credit cards</td>
</tr>
<tr>
<td>PULSE EFT Association</td>
<td>Debit card issuers</td>
<td>Periodically since 2005</td>
<td>Debit cards</td>
</tr>
</tbody>
</table>

Notes: all of these sources use surveys to collect data. PULSE EFT Association sponsors the survey of debit card issuers, which has been conducted by various consulting firms.
# Estimate of Actual Losses

## Fraud Losses on Debit and Credit Card Payments in the United States, 2006

<table>
<thead>
<tr>
<th>Card issuers</th>
<th>billions</th>
<th>Share of total loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIN debit</td>
<td>$0.028</td>
<td></td>
</tr>
<tr>
<td>Signature debit</td>
<td>$0.337</td>
<td></td>
</tr>
<tr>
<td>Credit cards</td>
<td>$1.240</td>
<td></td>
</tr>
<tr>
<td>ATM withdrawals</td>
<td>$0.397</td>
<td></td>
</tr>
<tr>
<td><strong>Total issuer losses</strong></td>
<td><strong>$2.002</strong></td>
<td><strong>59%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Merchants</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>POS</td>
<td>$0.828</td>
<td></td>
</tr>
<tr>
<td>Internet, mail order, and telephone</td>
<td>$0.568</td>
<td></td>
</tr>
<tr>
<td><strong>Total merchant losses</strong></td>
<td><strong>$1.396</strong></td>
<td><strong>41%</strong></td>
</tr>
</tbody>
</table>

**Total losses** $3.398

Fraud Losses Per Value of Transactions
Domestically Issued Debit and Credit Cards

Loss per $100

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

- U.S.
- UK
- France
- Australia
- Singapore
- Spain
- Netherlands
- Canada
Payment Fraud Statistics

- Effective risk management requires measurement of performance
  - Provides guideposts on outcomes of risk management efforts
  - Provides guidance for risk management strategies
  - Useful to industry participants as well as policymakers
  - Can be useful vehicle for public education
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