General Purpose Reloadable Prepaid Cards: Penetration, Use, Fees, and Fraud Risks

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Economics of Payments VII
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Prepaid card industry background

- Prepaid cards are the most rapidly growing payment instrument—their annual growth rate exceeds 20%
- Prepaid cards are available in many formats
- General purpose reloadable (GPR) prepaid cards are gaining traction among un- and underbanked consumers
- Policy issues: how to protect cardholders from fraudulent transactions on their cards and card issuer bankruptcy; efficiency gains by replacing paper-based payments with prepaid cards
- For businesses: prepaid cards are a less expensive alternative to checks for disbursing payroll and benefits
- For financial institutions: prepaid cards are new revenue sources (cardholder fees and interchange fees from retailers)
Purposes of our paper

• Examine how GPR prepaid cardholders actually use their cards
  – Market penetration
  – Account life span
  – Number and value of loads and spending
  – Composition of spending
  – Fees
  – Fraud rates

• Investigate which factors, if any, influence card use among GPR prepaid cardholders by conducting a regression model analysis to quantify the effects of account characteristics and zip-code-level sociodemographic characteristics
Data

Data provided by NetSpend, a leading prepaid card manager in the prepaid card industry

• **Account-level dataset**
  – Contains all GPR prepaid accounts which were active between July 1, 2011 and June 30, 2012 (over 3 million observations)
  – Includes:
    o Important dates
    o Load type
    o Program type
    o Card distributor
    o Number and value of loads, various debits and fees
    o Utilized services
    o Zip code
    o Account ID

• **Dataset on load transactions**
  – All load transactions during June 2012
  – Includes:
    o Amount
    o Location
    o Direct deposit/cash load
    o Account ID
Data

- **Transaction-level dataset**
  - All ATM and purchase transactions during June 2012
  - Includes:
    - Amount
    - ATM/PIN/Sig
    - CP/CNP
    - PIN purchase/cash back/PIN-less bill pay
    - MCC
    - Transaction ID

- **Dataset on fraud/disputed transactions**
  - All fraud/disputed transactions
  - Includes:
    - Amount
    - Date
    - Transaction code
    - Fraud code
    - MCC
    - Transaction ID
Data on sociodemographics

• County-level data to examine the penetration rate of NetSpend cards in each country
  – American Community Survey
  – Current Population Survey
  – US Census
  – FBI Uniform Crime Report
  – FDIC National Survey of Unbanked and Underbanked Households (state level)

• Census tract data (aggregated to the zip code level) to merge with NetSpend account-level data for regression analysis
  – Sociodemographic variables include sex, race, ethnicity, age, marital status, educational attainment, income, and violent and property crime rates (county level)
Market penetration of prepaid cards

- Number of active cards per 10,000 people by country

![Map showing market penetration of prepaid cards by county in the United States](image)
Account characteristics

Card distributor
- Check casher 60%
- Direct 22%
- Retail 10%
- Other 8%

Reload status
- Self-funded 45%
- Non-govt 18%
- Govt 7%
- Occasionally 13%
- Never 7%
- Occasionally 13%

Fee program
- Per transaction 77%
- Monthly 23%

Overdraft
- No 95%
- Yes 5%
Account characteristics, cont.

**Alert**
- Yes: 49%
- No: 51%

**Email**
- Yes: 58%
- No: 43%

**Customer service calls**
- Yes: 93%
- No: 7%

**Web users**
- Yes: 61%
- No: 39%
Card use “on average”

Monthly loads, debits, and lifespan

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loads</td>
<td>1.8</td>
<td>$516</td>
</tr>
<tr>
<td>Debits</td>
<td>8.2</td>
<td>$452</td>
</tr>
<tr>
<td>Lifespan</td>
<td></td>
<td>347 days</td>
</tr>
</tbody>
</table>

Shares of debit transactions ($)

- ATM: 18.9%
- Purchase: 79.6%
- Bill payment: 0.1%
- P2P: 1.4%

Shares of purchase transactions ($)

- Sig. CNP: 49%
- PIN: 29%
- Sig. CP: 22%
How card use varies by account characteristic?

Account characteristics that affect lifespan of accounts positively

- Periodic reloads (direct deposit)
- Monthly fee plan enrollment
- At least one overdraft
- Email
- Customer service call
- Web
- Alerts

Survival rates, by reload status
How card use varies by account characteristic?

Account characteristics that positively affect load and debit behavior

- Periodic reloads
- Monthly fee plan enrollment
- At least one overdraft
- Email
- Customer service call
- Web
- Alerts
- Greater share of cash withdrawals, bill payments, and P2P transfers

Average monthly debits and loads, by fee program

<table>
<thead>
<tr>
<th>Debits</th>
<th>Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly fee program</td>
<td>$855</td>
</tr>
<tr>
<td>Per transaction</td>
<td>$383</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly fee program</td>
<td>17.6</td>
</tr>
<tr>
<td>Per transaction</td>
<td>5.4</td>
</tr>
<tr>
<td>Monthly fee program</td>
<td>$956</td>
</tr>
<tr>
<td>Per transaction</td>
<td>$383</td>
</tr>
</tbody>
</table>
How card use varies by account characteristic?

Account characteristics that positively affect PIN and Sig. CNP share

PIN share
• Periodic reloads
• Monthly fee plan enrollment
• Tax
• Never overdraft
• Customer service call
• Alerts
• Average value of ATM per month

Sig. CNP share
• Self funded
• Per transaction
• Retail
• Overdraft
• Email
• Customer service call
• Web

Share PIN, Sig. CP, and Sig. CNP, by fee program

- Monthly fee program
- Per transaction

Value ($) Number
How card use varies by local sociodemographic characteristics?

Black
- Increased account lifespan
- Fewer monthly debits
- Higher ATM share (lower purchase share)
- Higher Sig. CNP share
- Lower PIN share
- Higher fee burden

Female
- Decreased account lifespan
- No effect on monthly debits
- Higher ATM share (lower purchase share)
- Higher PIN share
- No effect on Sig. CNP
- Slightly lower fee burden

Age
- Older consumers keep accounts active longer
- Higher ATM share among older consumers (lower purchase share)
- Younger consumers make relatively fewer Sig. CNP purchases
- Older consumers have a relatively higher fee burden

Crime
Where violent crime high:
- Decreased account lifespan
- Higher ATM share

Where property crime high:
- Increased account lifespan
- Higher purchase share
### Monthly fees “on average”

#### Monthly fee burden on consumers

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card issuer fees</td>
<td>6.8</td>
<td>$11</td>
</tr>
<tr>
<td>ATM surcharge fees</td>
<td>1.2</td>
<td>$2.80</td>
</tr>
<tr>
<td>Reload fees</td>
<td>0.8</td>
<td>$1-$3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.8</strong></td>
<td><strong>$15-$17</strong></td>
</tr>
</tbody>
</table>

#### Breakdown of card issuer fees

- **Signature transaction**: 36.7%
- **PIN transaction**: 19.5%
- **ATM withdrawal**: 15.9%
- **Other**: 2.5%
- **Monthly fee**: 8.7%
- **Account maintenance**: 8.5%
- **Decline**: 1.5%
- **ATM balance inquiry**: 1.2%
- **IVR balance inquiry**: 5.6%
Variation of fees paid to card issuers

Monthly volume

Monthly value ($)
### Relative monthly fees per debit transaction

Relative monthly fees vary by account and sociodemographic characteristic:

<table>
<thead>
<tr>
<th>Account</th>
<th>Incur higher relative monthly fees</th>
<th>Incur lower relative monthly fees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never reload</td>
<td>Non-government direct deposit</td>
</tr>
<tr>
<td></td>
<td>Occasional reload</td>
<td>Overdraft</td>
</tr>
<tr>
<td></td>
<td>Government direct deposit</td>
<td>Email</td>
</tr>
<tr>
<td></td>
<td>Per transaction fee program</td>
<td>Web</td>
</tr>
<tr>
<td></td>
<td>Check cashier distributor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher ATM share of debit transactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher PIN share of purchases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher Sig CNP share of purchases</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-demographic</th>
<th>Incur higher relative monthly fees</th>
<th>Incur lower relative monthly fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>15 years old and under</td>
<td></td>
<td>Higher property crime</td>
</tr>
<tr>
<td>Widowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relatively more educated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher violent crime</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Fraud rates

<table>
<thead>
<tr>
<th></th>
<th>Fraud rate (bps)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
</tr>
<tr>
<td>Cash withdrawals</td>
<td>9.60</td>
</tr>
<tr>
<td>Purchase transactions</td>
<td>5.39</td>
</tr>
<tr>
<td>PIN</td>
<td>2.54</td>
</tr>
<tr>
<td>Signature</td>
<td>6.95</td>
</tr>
<tr>
<td>Card present</td>
<td>3.98</td>
</tr>
<tr>
<td>Card not present</td>
<td>12.65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.93</strong></td>
</tr>
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</table>
Fraud rates, by fraud reasons

<table>
<thead>
<tr>
<th></th>
<th>Fraud rate (bps)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>$</td>
</tr>
<tr>
<td>PIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counterfeit</td>
<td>0.9</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Lost/Stolen</td>
<td>1.61</td>
<td>2.09</td>
<td></td>
</tr>
<tr>
<td>Unauthorized</td>
<td>0.03</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Signature CP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counterfeit</td>
<td>1.71</td>
<td>5.39</td>
<td></td>
</tr>
<tr>
<td>Lost/Stolen</td>
<td>2.22</td>
<td>6.43</td>
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</tr>
<tr>
<td>Unauthorized</td>
<td>0.05</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Signature CNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counterfeit</td>
<td>10.7</td>
<td>13.47</td>
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<tr>
<td>Lost/Stolen</td>
<td>1.54</td>
<td>1.34</td>
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<tr>
<td>Unauthorized</td>
<td>0.41</td>
<td>0.87</td>
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</tbody>
</table>
## Fraud – among largest merchant categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Fraud rate (bps)</th>
<th>Share in # within category (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>$</td>
<td>Sig CNP</td>
</tr>
<tr>
<td>Direct marketing</td>
<td>22.9</td>
<td>25.3</td>
<td>98.6</td>
</tr>
<tr>
<td>Misc. business services</td>
<td>20.4</td>
<td>15.6</td>
<td>90.2</td>
</tr>
<tr>
<td>Misc. professional services</td>
<td>9.7</td>
<td>15.5</td>
<td>98.0</td>
</tr>
<tr>
<td>Specialty retail</td>
<td>9.1</td>
<td>15.8</td>
<td>33.4</td>
</tr>
<tr>
<td>Cable</td>
<td>8.8</td>
<td>18.2</td>
<td>79.8</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>8.5</td>
<td>9.1</td>
<td>61.9</td>
</tr>
<tr>
<td>Clothing</td>
<td>8.0</td>
<td>18.1</td>
<td>11.9</td>
</tr>
<tr>
<td>Misc. &amp; specialty retail</td>
<td>7.6</td>
<td>10.4</td>
<td>24.0</td>
</tr>
<tr>
<td>Gas station</td>
<td>4.0</td>
<td>8.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Restaurant</td>
<td>3.7</td>
<td>6.1</td>
<td>9.9</td>
</tr>
<tr>
<td>Discount</td>
<td>3.5</td>
<td>8.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Insurance</td>
<td>3.3</td>
<td>3.5</td>
<td>77.7</td>
</tr>
<tr>
<td>Grocery</td>
<td>3.2</td>
<td>5.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Utility</td>
<td>3.0</td>
<td>3.5</td>
<td>57.7</td>
</tr>
<tr>
<td>Auto services</td>
<td>2.9</td>
<td>3.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Drug</td>
<td>2.9</td>
<td>5.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Fast food restaurant</td>
<td>2.1</td>
<td>2.5</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Questions?

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