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

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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)

• **Transaction-level dataset**
  - All ATM and purchase transactions during June 2012

• **Dataset on load transactions**
  - All load transactions during June 2012

• **Dataset on fraud/disputed transactions**
  - All fraud/disputed transactions

• **County and census tract sociodemographic data** (aggregated to the zip code level) to merge with NetSpend account-level data for regression analysis
Account characteristics

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

Reload status
- Self-funded: 45%
- Occasionally: 13%
- Never: 17%
- Non-govt. DD: 18%
- Govt. DD: 7%

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%
Market penetration of prepaid cards

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

![Map of the United States showing the market penetration of prepaid cards by county. The map uses a color scale to indicate the number of cards per 10,000 people, ranging from 0 to 500+. The scale includes categories such as 0, 1-25, 25-50, 50-100, 100-250, 250-500, 500+, and No data. The map highlights the variation in market penetration across different regions.]
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%
- **Bill payment**: 0.1%
- **P2P**: 1.4%

### Shares of purchase transactions ($)

- **Sig. CNP**: 49%
- **PIN**: 29%
- **Sig. CP**: 22%

**Purchase**: 79.6%
How card use varies by account characteristic?

Account lifespan

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

Days

0 150 300 450 600 750 900 1,050 1,200 1,350 1,500 1,650 1,800 1,950 2,100 2,250 2,400

0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00

Government direct deposit
All cards
Never reload
How card use varies by account characteristic?
Load and debit behavior

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>Monthly fee program</th>
<th>Per transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debits</td>
<td>$330</td>
</tr>
<tr>
<td>Loads</td>
<td>$383</td>
</tr>
<tr>
<td></td>
<td>$855</td>
</tr>
<tr>
<td></td>
<td>$956</td>
</tr>
</tbody>
</table>
How card use varies by account characteristic?

Purchase transactions

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 proram
- Per transaction

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

**Black**
- Decreased account lifespan
- No effect on monthly debit value
- Higher ATM share (lower purchase share)
- Higher Sig. CNP share
- Lower PIN share
- Higher fee burden

**Female**
- Increased account lifespan
- Female consumers make relatively more 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
- Fewer monthly debits
- Higher ATM share

Where property crime high:
- Increased account lifespan
- More monthly debits
- 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>$2.8</td>
</tr>
<tr>
<td>Reload fees</td>
<td>0.9</td>
<td>$0.9-$3.6</td>
</tr>
<tr>
<td>Total</td>
<td>8.8</td>
<td>$15-$17</td>
</tr>
</tbody>
</table>

Breakdown of card issuer fees

- ATM withdrawal: 15.9%
- PIN transaction: 19.5%
- Signature transaction: 36.7%
- Monthly fee: 8.7%
- Account maintenance: 8.5%
- Decline: 1.5%
- ATM balance inquiry: 1.2%
- IVR balance inquiry: 5.6%
- Other: 2.5%

Monthly fee burden on consumers

Card issuer fees: average $11
ATM surcharge fees: average $2.8
Reload fees: average $0.9-$3.6
Total: average $15-$17
Variation of fees paid to card issuers

**Monthly volume**

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>70</td>
<td>7</td>
</tr>
<tr>
<td>90</td>
<td>16</td>
</tr>
</tbody>
</table>

**Monthly value ($)**

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>$1</td>
</tr>
<tr>
<td>30</td>
<td>$3</td>
</tr>
<tr>
<td>50</td>
<td>$6</td>
</tr>
<tr>
<td>70</td>
<td>$12</td>
</tr>
<tr>
<td>90</td>
<td>$26</td>
</tr>
</tbody>
</table>
• Our datasets enable us to analyze detailed fraud risk surrounding prepaid cards
  o By type of transactions – ATM, PIN, or Signature; CP or CNP
  o By reasons – counterfeit, lost/stolen, account takeover, other
  o By merchant category – grocery, gas station, fast food, cable, utility, etc.
• Fraud rates are modestly higher than other publicly available fraud statistics but patterns are generally consistent (PIN<ATM<Signature)
Analysis of cards with direct deposit
Account characteristics of direct deposit users

Card distributor
- Direct: 32%
- Check casher: 58%
- Retail: 6%
- Other: 4%

Reload status
- Govt. DD: 27%
- Non-govt. DD: 73%

Fee program
- Monthly: 58%
- Per transaction: 42%

Overdraft
- Yes: 22%
- No: 78%
Account characteristics of direct deposit users, cont.

- **Alert:** Yes 83%, No 17%
- **Email:** Yes 83%, No 17%
- **Customer service calls:** Yes 83%, No 17%
- **Web users:** Yes 83%, No 17%
Card use “on average” of direct deposit users

Monthly loads, debits, and lifespan

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loads</td>
<td>2.6</td>
<td>$1139</td>
</tr>
<tr>
<td>Debits</td>
<td>18.7</td>
<td>$953</td>
</tr>
<tr>
<td>Lifespan</td>
<td></td>
<td>1050 days</td>
</tr>
</tbody>
</table>

Shares of debit transactions ($):
- ATM: 34%
- Bill payment: 0%
- P2P: 3%

Shares of purchase transactions ($):
- PIN: 40%
- Sig. CNP: 43%
- Sig. CP: 17%

Purchase: 63%
Monthly fee burden on consumers

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card issuer fees</td>
<td>11</td>
<td>$20</td>
</tr>
<tr>
<td>ATM surcharge fees</td>
<td>3.4</td>
<td>$7.9</td>
</tr>
<tr>
<td>Reload fees</td>
<td>0.4</td>
<td>$0.4-$1.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.8</strong></td>
<td><strong>$28-$30</strong></td>
</tr>
</tbody>
</table>

Breakdown of card issuer fees:
- ATM withdrawal: 31%
- PIN transaction: 16%
- Signature transaction: 17%
- Other: 8%
- Monthly fee: 18%
- Account maintenance: 1%
- IVR balance inquiry: 5%
- ATM balance inquiry: 2%
- Decline: 2%
Conclusion

- GPR prepaid cards are especially popular in areas densely populated by the unbanked and underbanked
- GPR prepaid cards are generally short-lived but cards with direct deposit survive much longer
- Intensive of use, composition of spending transactions, and fees incurred by cardholders per month vary by account and socio-demographic characteristics
- GPR cardholders who receive direct deposits use their cards intensively (with higher ATM share) and incur higher fees per month
- Fraud rates are modestly higher than other publicly available fraud statistics
## Appendix - Fraud rates

<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><strong>PIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>2.54</td>
<td>3.83</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>Other unauthorized</td>
<td>0.03</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td><strong>Signature CP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>3.98</td>
<td>11.96</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>
<td></td>
</tr>
<tr>
<td>Other unauthorized</td>
<td>0.05</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td><strong>Signature CNP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>12.65</td>
<td>15.69</td>
<td></td>
</tr>
<tr>
<td>Counterfeit</td>
<td>10.7</td>
<td>13.47</td>
<td></td>
</tr>
<tr>
<td>Lost/Stolen</td>
<td>1.54</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>Other unauthorized</td>
<td>0.41</td>
<td>0.87</td>
<td></td>
</tr>
</tbody>
</table>